Occupational HAZARDS

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MAR 14 1949

THERE'S PROFIT IN PREVENTION

MARCH
1949

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exhibitors to the
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and
Exposition.

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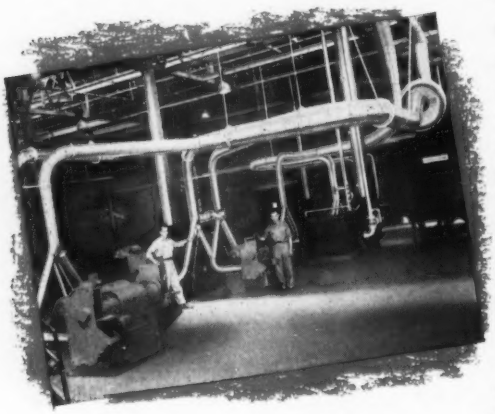
ISS!

GREATER NEW YORK SAFETY COUNCIL
19th Annual Safety Convention and Exposition
Hotel Statler – March 29 to April 1 1949, New York City

"CHIPS fall where they may?"

..but NOT IN PLANT OF NOTED IMPLEMENT MANUFACTURER



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Chipping and Grinding Departments equipped with KIRK & BLUM Dust Collecting Systems . . .

● Today's modern foundry places more and more emphasis on efficient dust collection. A newly constructed Southern foundry containing the most advanced equipment was recently placed in operation by one of the nation's largest manufacturers of farm equipment. Part of the chipping and grinding department of this foundry is illustrated here.

● This noted firm realizes that clean air means greater production, happier and healthier workers, less maintenance and replacement costs on motors and other equipment.

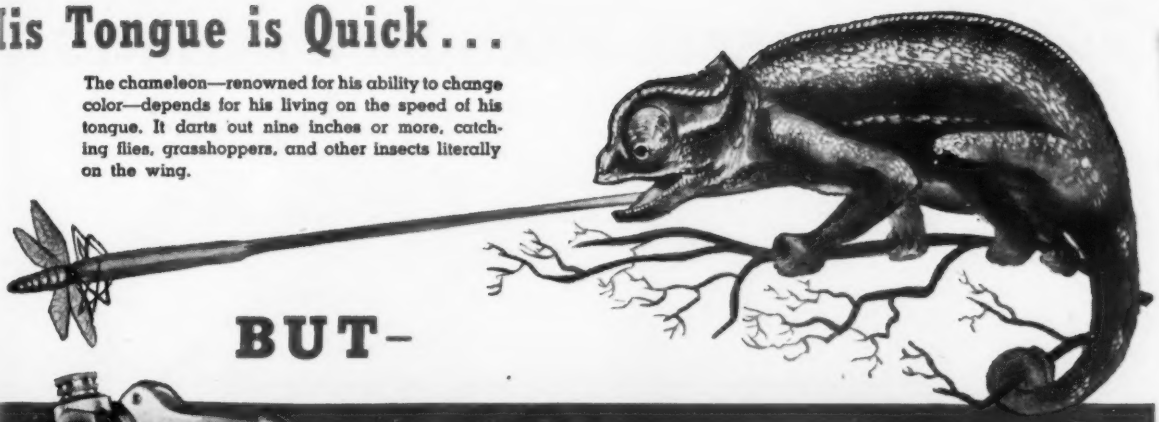
● Besides the systems shown here, KIRK & BLUM built and installed a variety of other systems for dust and fume removal. If you are considering building or remodeling your plant, you can profit from Kirk & Blum experience on this and hundreds of other jobs. Write for free booklet "Dust Collecting System in Metal Industries." *The Kirk & Blum Mfg. Co., 2802 Spring Grove Ave., Cincinnati 25, Ohio.*

FOR CLEAN AIR . . . THE INVISIBLE TOOL

KIRK AND BLUM
DUST CONTROL SYSTEMS

His Tongue is Quick . . .

The chameleon—renowned for his ability to change color—depends for his living on the speed of his tongue. It darts out nine inches or more, catching flies, grasshoppers, and other insects literally on the wing.



BUT—

Nothing is Quicker than GENERAL QUICKAID FIRE GUARD For Fighting Fire!

Your life or your property may depend on the speed of your fire fighting equipment. A few seconds may spell the difference between a tiny flame and an unmanageable blaze. Quick-Aid Fire Extinguishers save you precious seconds because they operate quickly, cleanly, efficiently. Quick-Aid Carbon Dioxide Extinguishers (illustrated here) are available in all sizes from 2½ to 100 lbs. They are Underwriters' Approved and especially recommended for fires in electrical equipment, gasoline, and chemicals. Look in the classified section of your telephone book for the Quick-Aid trade mark or write direct for the name of your nearest dealer.

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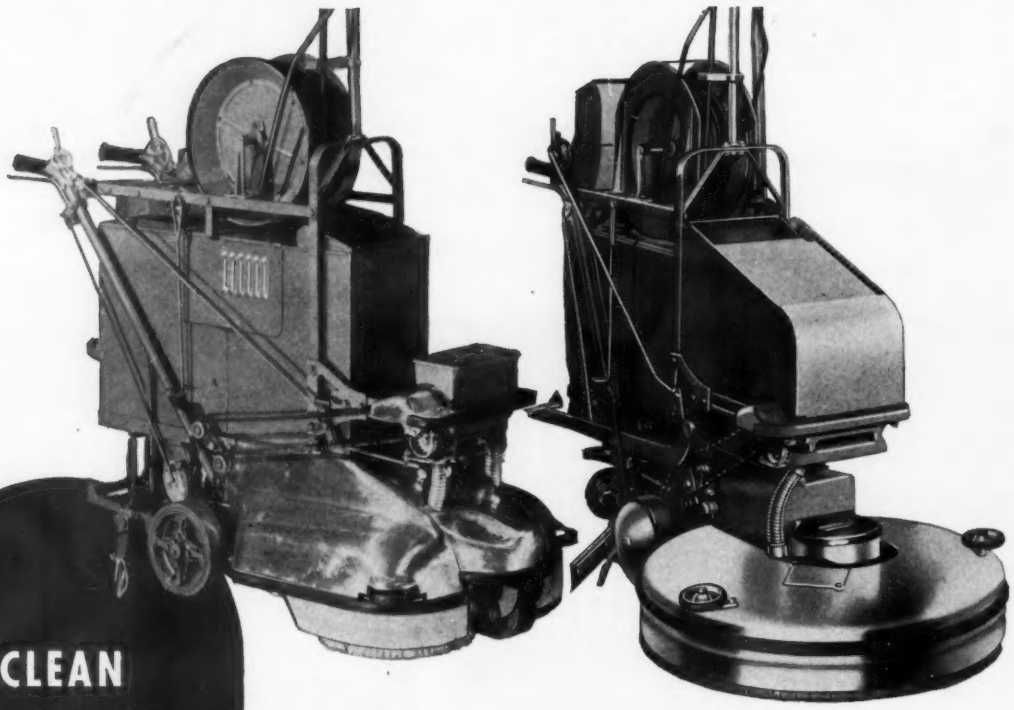
IF IT'S GENERAL IT'S DEPENDABLE

Finnell SCRUBBER-VACUUM MACHINES...



CLEAN LARGE-AREA FLOORS

The Modern, Faster Way

•

REDUCE LABOR COSTS

With a *Finnell Scrubber-Vacuum,* all four of the floor-cleaning operations can be done mechanically! A *Finnell Scrubber-Vacuum* (1) applies the cleanser, (2) scrubs, (3) rinses if required, and (4) picks up. With one or two operators, this *all-in-one* unit can do a cleaning job better in half the time it takes a crew of six to eight using separate equipment for the several operations.

The model shown above at left, for heavy duty requirements, has a cleaning capacity up to 8,750 sq. ft. per hour. The single disc machine shown above at right, for use on the smoother type of floors, cleans up to 10,000 sq. ft. per hour! *Finnell* also offers a *Scrubber-Vacuum* for smaller operations . . . for use in congested areas. All *Finnell Scrubber-Vacuum Machines* are *self-propelled* and are available with *silent* vacuum.

There's *a Finnell man nearby* to help train your maintenance operators in the proper use of *Finnell Equipment.* For consultation, demonstration, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 3503 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

Everything FINNELL For Floor Care

FINNELL SYSTEM, INC.

Pioneers and Specialists in

FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES

BRANCHES IN ALL PRINCIPAL CITIES

Occupational HAZARDS

VOLUME 11 • No. 5

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CONTENTS FOR MARCH 1949

"THERE'S PROFIT IN PREVENTION"

COVER: Arc welding on a Ford assembly line. Note protective apparel worn by welder, including gauntlet-type gloves, apron and elbow sleeve.

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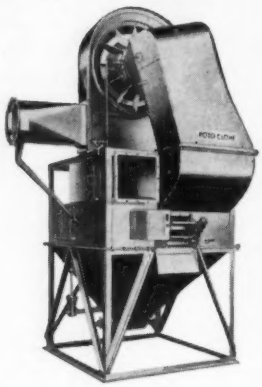
Could you pass this quiz on WET-TYPE dust collectors?

Important questions regarding Roto-Clone* wet-type dust collectors to which you should have the *CORRECT* answers.



Question No. 1—What efficiency can be expected from a wet-type dust collector on extremely fine dust?

Answer—Scores of Type W and Type N Roto-Clones are functioning daily at better than 98% efficiency on small micron particles such as found in foundry sand handling systems; ore crushing and screening; material drying, roasting and sintering operations. In fact, it is not uncommon to obtain efficiencies of 99.5% on such applications.

Question No. 2—Does operation of wet-type dust collectors require a large volume of water?

Answer—The Roto-Clone system of bringing the dust to the water makes effective use of every gallon supplied. That's why the Type W Arrangement A requires the supply of less than ½ gallon of water for each 1000 CFM of dust-ladened air cleaned.

Where water disposal is a problem, the Type N Roto-Clone is available. This unit recirculates the water without aid of pumps or nozzles. Water consumption is limited to the small amount required to provide for evaporation.

Question No. 3—Is wet-type dust collection expensive?

Answer—The cost of a Roto-Clone system is no more than that of other dust collectors of comparable efficiency. Actually, due to the small space requirements and factory method of assembly, the installed cost of a Roto-Clone is usually less.

WRITE FOR THIS FREE BULLETIN

Roto-Clone Bulletin 270A contains complete information on the design and application of both dry- and wet-type Roto-Clone dust collectors. Write for a copy today—it has the answers to your difficult dust collection problems.

**Roto-Clone is the trademark (Reg. U. S. Pat. Off.) of the American Air Filter Company, Inc., for various dust collectors of the dynamic precipitator and hydro-static precipitator types.*

AMERICAN AIR FILTER COMPANY, INC.
366 Central Ave., Louisville 8, Ky.
In Canada: Darling Bros., Ltd., Montreal, P.Q.

®AAF

ROTO-CLONE®
DUST CONTROL EQUIPMENT

Do you have any questions, theories or ideas concerning industrial health or safety? If you want to give them a good airing—send 'em along. We'll publish all space permits.

Gruesome Pictures

OCCUPATIONAL HAZARDS:

I am writing you in reference to safety photographs. Frankly, I feel that my cause is a lost one. I have been trying to find out where one can secure actual photographs such as those which you print each month in your section, "And Sudden Injury."

I am a firm believer in the efficacy of visual education, especially in matters pertaining to safety and accident prevention. I feel that one photograph, as gruesome as possible, will do more to prevent accidents than 500 watered-down trite safety posters. Surely, there is some group or agency which supplies such pictures, but as yet I have been unable to locate one. Can you help?—David Potter, Employment Manager, Plastic Manufacturers, Stamford, Conn.

Strictly in confidence, Mr. Potter, we confess to you that obtaining the pictures that appear in our "Sudden Injury" section is a full time job! They are so hard to find that our printer has gotten used to the idea of holding up the presses until two minutes before deadline—that's when he usually gets the picture! Actual photographs of industrial accidents are naturally very difficult to obtain because persons with cameras are not often on the spot at the right time. We take pride, however, in running only true photographs and point out that we have never run a "posed" accident photo in our "Sudden Injury." There is no agency or group specializing in this type of photo, but you have our permission to reprint these photos, credit line included.—Ed.

Out of Reprints

OCCUPATIONAL HAZARDS:

We would appreciate having four reprints of the series of articles on

Paul Windsor's "Cost of Accident" report.—G.A.L. Johnson, LT. MSC USN Industrial Hygiene Officer, New York Naval Shipyard.

OCCUPATIONAL HAZARDS:

Will you kindly let me have a half dozen copies of Paul Windsor's "Cost of Accident" article? The writer frequently speaks to various Chamber of Commerce groups, foremen organizations etc., in addition to teaching at the center for Safety Education at New York University. Material in the article is valuable.—J. S. Cruickshank, Chief Engineer, United States Guarantee Company, N. Y.

We are sorry to inform Lt. Johnson, Speaker-Engineer Cruickshank, and all our other readers that OH's supply of Mr. Windsor's report has recently been exhausted. This sets some sort of record as thousands of copies were given out. We are glad to give anyone permission to reprint the article, however, provided we be given a mention.—Ed.

Status of the Safety Director

OCCUPATIONAL HAZARDS:

In your December, 1948 issue I was very much impressed with your article written by Mr. Raymond H. Ulrich, "The Executive's Relation to and With the Safety Department." If any reprints are available I would like to receive about 10 copies to send each of the officers of the American Society of Safety Engineers and the members of a special committee, of which I am Chairman, in regard to the organization position of the Safety Director. In my opinion Mr. Ulrich has written a splendid article which reflects that he has given much thought in the establishment of the position of the Safety Director in the organization so as to obtain the best results in the accident prevention program of his company. I highly compliment his article and so wish to compliment him.—E. C. McFadden, Vice President, American Society of Safety Engineers.

We agree with Reader McFadden on the importance of the establishment of the position of the Safety Director in the organizational set-up and welcome any well written articles on the subject for possible publication in these pages.—Ed.

Mr. Higby and the Legge Safety Engineer — No. 65

The floor of this institution's lounge, a "prestige" item, cost $3328 a year to keep up . . . more than the cost of the floor itself! A Legge Safety Engineer shows them . . .

How to cut $3016 a year from the price of prestige

Mr. Higby: Look at these figures! A whole night's work for 8 men every week. And the floors look rotten. How come?

Legge Safety Engineer: You're using a wax and it doesn't last. Your crew has to wash it off each time . . then put on a new coat. They go through the same rigamarole every week. It takes a lot of time.

Mr. Higby: What can be done?

Legge Safety Engineer: Use a Legge Non-Slip floor polish. It stands up under heavy traffic. I'll show your crews how to make it last by cleaning and buffing . . . sometimes mopping on more polish. But they won't have to strip it off. That's the work that takes time.

(A MONTH LATER) Mr. Higby: This is better! Now 3 men do the floor in 2 hours. I'm saving $58 a week. And the floors look swell.

Legge Safety Engineer: They'll stay that way if your men follow my instructions. I'll stop by often to make sure they do.

Get this man's help on your problems

He's the Legge Safety Engineer who has helped Mr. Higbys in your area get well-kept floors at lower cost . . . reduce slippery-floor accidents up to 95%. He engineers an upkeep program to your floors; instructs your maintenance crews in efficient Legge System methods. His advice is free; his supervision is part of your purchase of Legge Non-Slip floor-care products.

Before your floors cost you any more, get the whole Legge System story. Clip the coupon to your letterhead and mail.

Walter G. Legge Co. Inc., New York N. Y.
Branch offices in principal cities

LEGGE
SYSTEM
of Non-Slip Floor Maintenance

Walter G. Legge Co., Inc., Dept. O
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Please send me a free, no-obligation copy of *Mr. Higby Learned About Floor Safety the Hard Way.*

Signed _____
Title _____
Type of floor _____
Area _____ sq. ft. O-A3

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ANOTHER HY-TEST PLUS

5 of 19 Mobile Service Units

ST. LOUIS, MO.

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Shown here are but five of Hy-Test's 19 mobile shoe stores* serving the country's largest industrial areas. Each unit contains a complete stock of sizes and widths and is operated by an experienced safety shoe fitter. This convenience is, of course, in addition to Hy-Test's regular service to industrial plants.

WRITE FOR COMPLETE DETAILS

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Vernon, California
Chicago, Illinois (2)
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Fort Wayne, Indiana
Louisville, Kentucky
Lafayette, Louisiana
Detroit, Michigan
Kansas City, Missouri
St. Louis, Missouri (2)
Cincinnati, Ohio
Cleveland, Ohio
Pittsburgh, Pennsylvania (2)
Memphis, Tennessee
Seattle, Washington
Milwaukee, Wisconsin

5 of HY-TEST's 50 Safety Shoe Types

H712—Men's Brown Kip Blu Oxford—Leather Sole—Half Rubber Heel.

H711—Men's Russet Glove Moc Blu Oxford—Leather or Neoprene Sole—Half Rubber Heel.

H722-1-Men's Russet Glove Lace-to-toe Blucher—Cord Sole—Rubber Heel.

H661-4—Men's Black Retan Moulders Nullifier—Comp. and Chrome Lea. Full Double Sole—Rbr. Heel.

H727—Men's Black Glove Blu—Composition and Leather Full Double Sole—Rubber Heel.

...Insure Workers Feet In Sure Protection

See Us in Booth No. 4 at the 19th Annual Safety Conference & Exposition in New York City, March 29-April 1st.

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Fire HAZARD SIGNS

DANGER
NO SMOKING MATCHES OR OPEN LIGHTS

CAUTION
FIRE ALARM HANDS OFF

DO NOT USE ON ELECTRICAL FIRES

FOR USE ON ALL FIRES

THINK
MAKE YOUR REAR SAVE YOU FROM HARM
A FIRE TO-DAY NO JOB TO-MORROW

NOTICE
KEEP THIS DOORWAY FREE OF OBSTRUCTIONS SO FIRE DOORS CAN CLOSE

USE ON OIL FIRES ONLY

CAUTION
PASSAGE TO THIS FIREHOSE MUST BE KEPT CLEAR

FIRE EXIT

One Match

MIGHT SET THE WORLD ON FIRE!

NOTHING is more devastating to the worker than to stand helplessly by while flames destroy his work place and his job.

And the worst of it is, the hand of Carelessness nearly always holds the torch.

STONEHOUSE SIGNS

For Accident Prevention

Teach your workers to mentally fight fire before it starts . . . by being careful . . . with the help of Stonehouse Fire Prevention signs.

Our complete Catalog No. 8, in full color, showing many "Fire" signs, is free on request.

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ACCIDENT PREVENTION SIGNS IN STANDARD COLORS AND DESIGNS

AO PANORAM Goggles

Now...For Extra Comfort...AO Panoram Goggles with All-Rubber Cushions

Long popular with workers because of its exceptional wide angle vision and lightweight frame, this plastic safety goggle now provides additional protection as well as comfort for those whose work requires constant wearing over extended periods. The cushions of soft, pliable, non-toxic neoprene sponge rubber eliminate any possibility of flying particles entering from the side, top and bottom. They are molded to the shape of the eyecup and can be snugly and securely fitted without stapling, cementing or sewing. Replacement is simple and easy. Your nearest AO Safety Representative can supply you.

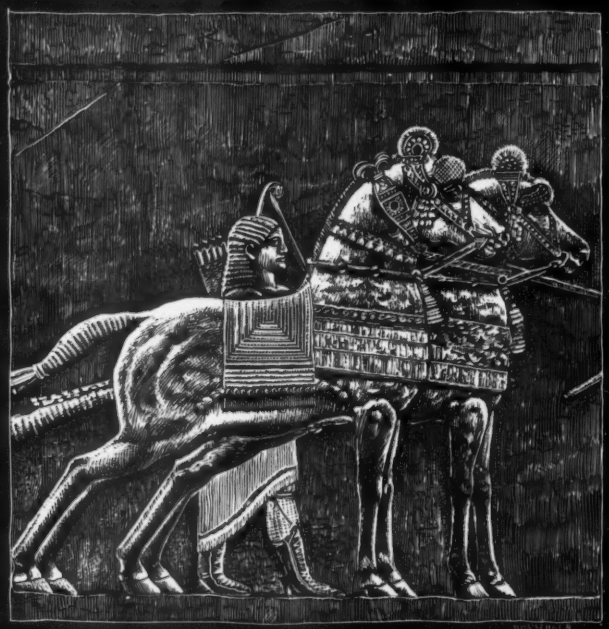
Other Panoram Goggle Features

Replaceable lenses in clear or green acetate • frames conform closely to face and forehead • bridge fits any nose without pressure • vented eyecups reduce lens fogging • elastic headband assures close fit.

American Optical Company
SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches in Principal Cities

Of Highest Merit



MARBLE WALL SLAB
PALACE OF SARDANAPALUS
Nineveh, about 625 B. C.

"The style and execution of the wall-sculptures from the royal palaces of Nineveh . . . are the finest . . . and date from 705 to 625 B. C. These are carved in low relief with almost gem-like delicacy on enormous slabs of white marble."[1] Such remarkable accomplishment by an unknown sculptor, more than 2500 years ago, must have required the highest technical skill and almost infinite patience.

Like the developments made by Pax Research Technicians, lasting merit in either art or industry has been achieved only through continual striving toward perfection. For almost a quarter century the Pax Research Laboratory has worked to improve still further Pax-Lano-Sav Heavy Duty which has remained, for all this time, unsurpassed in gentle, thorough cleansing, dependable safety, exceptional economy and unvarying high quality.

[1]Encyclopaedia Britannica

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There is Nothing Finer For All General Occupational Skin Cleansing

PAX-LANO-SAV*—a superior skin emollient combining lanolin and other special skin normalizers.

49C

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PAX-LANO-SAV EMOLLIENT was developed in our Research Laboratory after years of intensive research. It is superior to lanolin alone because it skillfully combines generous quantities of lanolin PLUS other fine skin normalizers making PAX-LANO-SAV EMOLLIENT more effective in a skin cleanser. Integrated into PAX-LANO-SAV HEAVY DUTY Granulated Skin Cleanser in abundant quantity, PAX-LANO-SAV EMOLLIENT helps to protect the natural acid mantle of the skin during the wash. Skillful formulation of PAX-LANO-SAV HEAVY DUTY Granulated Skin Cleanser, remarkable cleansing ability, quick profuse suds and great bulk assure exceptional economy together with real satisfaction in use. Because it always stays free-flowing it may be used in the usual commercial dispenser for powdered soap.

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Manufacturers of Fine Industrial Skin Cleansers

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*Tradename of G. H. Packwood Mfg. Co.

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Plastic Frame Spectacles

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Cup-Type Goggles

Welding Goggles

Flash Goggles

Welding Helmets

Lift-Front Helmets

Open-Top Face Shields

Crown-Top Face Shields

Acitex Hoods

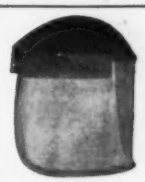
SEE How CESCO Meets *ALL* of These Safety Requirements

• When you need head, eye and body protective equipment undoubtedly there's a CESCO product that meets your exact requirements.

The CESCO line includes well over 200 safety products. Every item has been expertly developed, proved in use and meets high standards of safety equipment quality.

So, it will pay you to follow this simplified 3-step safety formula: *1*) Know your safety needs, *2*) Refer to the GUIDES TO SAFETY in the new CESCO Catalog, *3*) Use recommended CESCO protective equipment.

Air-Fed Helmets

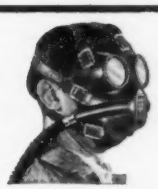


Spark Shields

Aprons & Sleeves

Nuisance-Dust Respirators

Toxic-Dust Respirators



Abrasive Masks

Paint-Spray Masks

Fume Kits

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CESCO's *new Safety Catalog tells you where to use, how to use and how to select industrial protective equipment. If you do not have one, write for your copy today.*

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3 NEW ways to keep toes safe!

NEW ***. . . for universal heavy-duty*** — *A "Brute" for wear and service, in tough, natural retan, with Neo-Cord* soles and heels that will stand up even on sand and gravel. Use it where ordinary work shoes go to pieces fast. It's the toughest shoe we know how to make!*

NEW ***. . . for slipping hazards*** — *Army Russet blucher with comfortable seamless back; Vul-Cork* soles and heels that* **grip** *and* **hold** *on metal, tile, wood or any surface . . . wet or dry! Use it wherever severe slipping hazards exist and watch your accident rate plummet!*

NEW ***. . . for refineries; oily-floor departments*** — *A mahogany moccasin oxford built with special oil-resistant Neo-Cord* soles and heels. Help prevent skids on oily floors; won't rot and crumble under the most severe oily conditions.*

SEND FOR THE LEHIGH CATALOG with 38 other safety shoes and boots designed to lick the specialized problems of every industry.

ONLY LEHIGHS are made with the ***Lockrim**** **STEEL TOE BOX**

You can bet your toes on it

*T. M. Reg.

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Division of the ENDICOTT JOHNSON CORPORATION

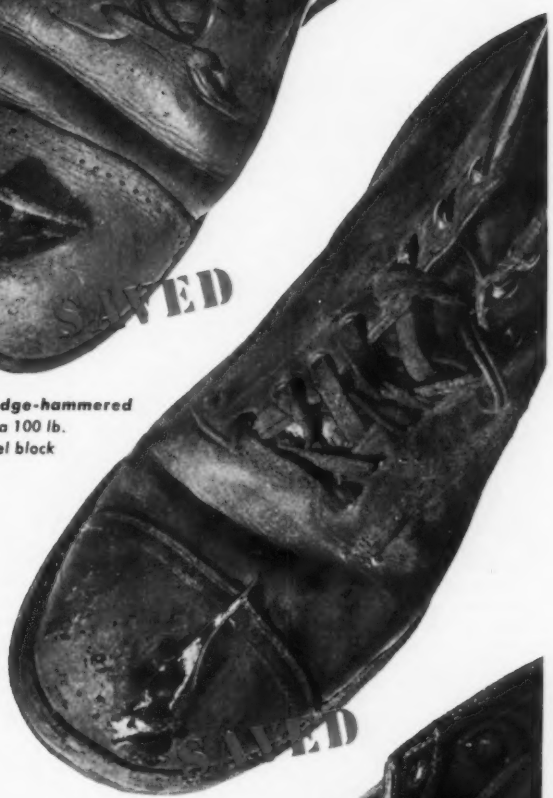
SAFETY SHOE COMPANY

ALLENTOWN, PA.

See Lehigh's complete line of new safety shoes and boots at the
19th ANNUAL SAFETY EXPOSITION
BOOTH 16 · March 29th to April 1st
Statler Hotel, New York
(Formerly Hotel Pennsylvania)

— with the same *dependable* LEHIGH *protection!*

Sledge-hammered by a 100 lb. steel block



Mangled by a high-speed conveyor belt

Gashed by a 600 lb. steel bedplate

Here are just a few Lehigh case histories . . . the true stories of Lehighs at work, ***saving*** feet from the crippling, crushing destruction of unbelievable weights and power. They're evidence of Lehigh's proved performance, protection when and where it's needed. They're the reason why so many of the nation's largest industries rely on Lehigh to prevent foot injuries. They're examples of the kind of foot-protection you buy when you put your men in Lehighs. ***Don't take chances. Be sure, with Lehigh.***

Phone, wire or write to have a Lehigh representative call. He can recommend the Lehigh shoes or boots built specifically to serve in your operation.

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Supplied Air Masks

★ M.S.A. HOSE MASKS: supply fresh air through hose to wearers in confined spaces; hand- or motor-operated blowers.

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★ M.S.A. ABRASIVE MASK: heavy-duty, durable protection for shot- and sandblast operators.

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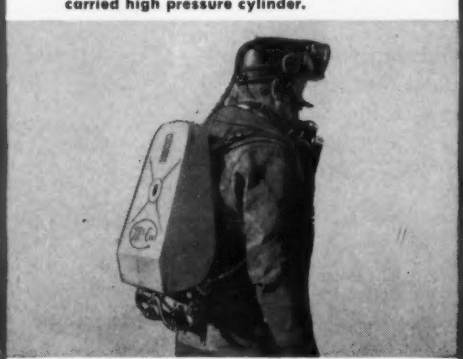
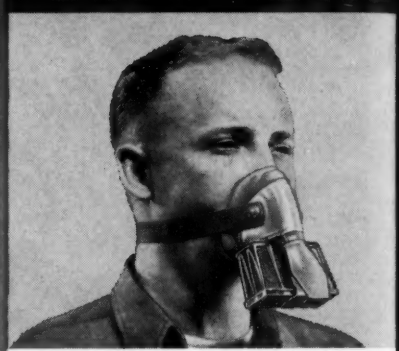
★ M.S.A. CHEMOX: makes its own oxygen—as you breathe—in replaceable chemical canister. 45-minute protection.

★ M.S.A. DEMAND MASK: ½-hour supply of air or oxygen, demand-regulated, with back-carried high pressure cylinder.

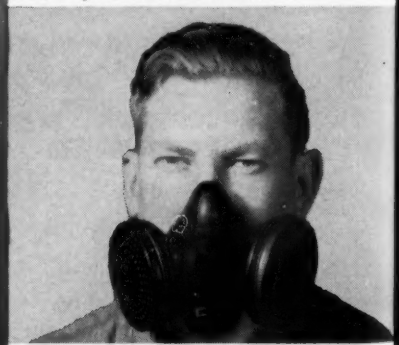


★ McCAA TWO-HOUR OXYGEN BREATHING APPARATUS: for rugged, extended service in unbreathable air.

Dust and Fume Respirator



★ M.S.A. DUSTFOE RESPIRATOR: All-Dust protection. Formable aluminum facepiece, transparent filter container.



★ M.S.A. COMFO RESPIRATOR: twin, large-area filters for all dusts. Comfo cushion facepiece provides airtight seal on face.

★ M.S.A. METAL FUME RESPIRATOR: special filters for protection against harmful metal fumes. Comfo facepiece.

PLUS VITAL WEARING COMFORT—WITH

the *Complete Line* of RESPIRATORY PROTECTION

for every breathing hazard on any industrial job

★ U. S. BUREAU OF MINES APPROVED

Canister Gas Masks

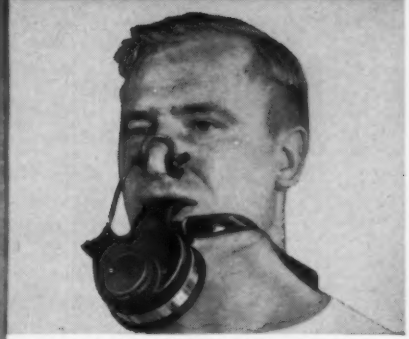
★ M.S.A. TYPE "S" ALL-SERVICE GAS MASK: protects against smoke and all industrial gases, including carbon monoxide.

★ M.S.A. AMMONIA MASK: specialized safety for refrigerant emergencies and repair, with long-life ammonia canister.

★ M.S.A. INDUSTRIAL GAS MASK: protects against individual gases, with a wide selection of specific canisters.

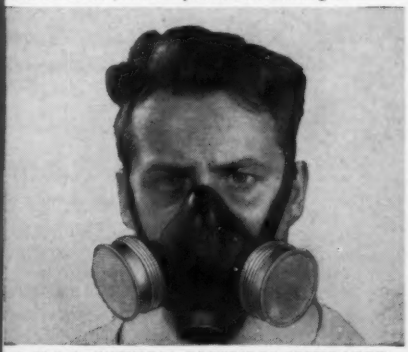
★ M.S.A. TANK GAUGER'S MASK: supersize canisters for hydrogen sulphide, and other petroleum gases and vapors.

Cartridge Respirators



M.S.A. GASFOE RESPIRATOR: ever-ready protection against light acid gases, organic vapors. Can be worn around neck or carried in pocket.

M.S.A. GAS-FUME RESPIRATOR: multi-purpose type, for light gases, vapors, dusts, fumes. Back-carried, twin replaceable cartridges.



★ M.S.A. CHEMICAL CARTRIDGE RESPIRATOR: twin-cartridge, for paint spray vapor, light acid gases and organic vapors.

MINE SAFETY APPLIANCES COMPANY

BRADDOCK, THOMAS AND MEADE STREETS • PITTSBURGH 8, PA.

At Your Service:

54 BRANCH OFFICES IN THE UNITED STATES AND CANADA

Safety Engineers pick Thom McAn for 3 important reasons!

S-4370 — Moccasin toe blucher, cordovan color, oiled leather sole, rubber heel. Safety steel toe cap.

1 Money-Saving Prices!

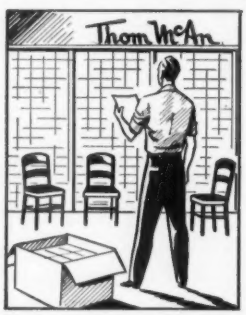
Thom McAn Safety Shoes are made by the manufacturer of the world's largest selling shoe brand! Production savings of large-scale, efficient manufacturing make prices like these possible. *At no sacrifice in safety standards!*

2 Better Safety Records!

Workers wear more Thom McAns than any other shoe brand. They know and trust the name. That's why they buy and wear Thom McAn Safety Shoes willingly. This increase in willing wearers cuts down foot accidents, contributes to better safety records in plant after plant.

3 4-Way Plant Stock Service!

1 All styles are maintained in our stock at all times, assuring prompt delivery on any style, any size.



2 You carry fewer shoes in stock, tie up less inventory, save on stock space.

3 Guaranteed exchange of unnecessary sizes and styles for needed numbers prevents dead stock and inventory losses.

4 Unequalled shoe merchandising experience and customer satisfaction, acquired by operating over 530 stores in more than 300 cities, is available to all plant shoe departments at all times.

Sold Direct to Plants

$7.15 net F.O.B. Worcester, Mass. Purchases up to 48 pairs—straight list price. 48–144 pairs, 5% discount. 144 pairs and over, 10% discount. Prices subject to change without notice.

Also Sold Through Thom McAn Stores

Write for complete details of Thom McAn Store Service Plan.

Thom McAn

A DIVISION OF MELVILLE SHOE CORP.

THOM McAN SAFETY SHOE DIVISION, 25 West 43rd Street, New York, N. Y.

MORE MEN WEAR THOM McANS THAN ANY OTHER SHOE BRAND

DERMATITIS DOWN

...after using
WEST LAN-O-KLEEN HAND CLEANSER
...with *Lanolinized* Corn Meal

Figures don't lie—and cold figures from plant after plant of every size confirm this fact: That WEST LAN-O-KLEEN is *more* than just a fast-acting powdered hand cleanser that washes away stubborn grit, grease and grime with remarkable ease and thoroughness. It's a *safety* measure that actually helps reduce industrial skin infections — thus lowering absenteeism and production costs to a notable degree. Like all sanitary products formulated exclusively by West, LAN-O-KLEEN possesses that "little something extra" that makes it *extra*-ordinary. It contains no harsh abrasives — no excess alkali to harm the skin. What's more—its fine corn meal base is impregnated with an *extra-generous amount of lanolin* — thus helping to combat the loss of natural skin oils.

Let Us Prove It Can Happen in YOUR Plant

A trial test of WEST LAN-O-KLEEN will convince you that it should be standard equipment in *your* dermatitis prevention program. Write for a sample. With it you will also receive free a booklet telling how to use LAN-O-KLEEN — and how the LAN-O-KLEEN Dispenser can save you money.

SEND FOR FREE SAMPLE

WEST DISINFECTING Company

42-16 West Street,
Long Island City 1, N. Y.

WEST DISINFECTING COMPANY
42-16 West Street, Long Island City 1, N. Y.

Gentlemen:
Please send me a free sample carton of LAN-O-KLEEN.

Name_____ Position_____
Company_____
Address_____
City_____ State_____

14

LET'S KEEP OUR GAINS

THE present hue and cry over real and imagined threats of subversive elements to the safety, security and established order of the United States must not be allowed to obscure the big responsibility which we have to keep our own house in order. Gains which we have made in strengthening our system of private enterprise must not be lost. Further advancements must be expected.

It was largely the ingenuity and productivity of our free enterprise system which won the war. The same features of our American way of doing things should constitute the best guard against any pestilences which may creep in from abroad.

Partners in the system of private enterprise are stockholders, management, employees and patrons. Honesty and sincerity must be the basis for their ventures, large or small. Frank dealings and a free exchange of information between all parties is a major requirement.

It is because business so often has aroused suspicion on the part of stockholders, employees and customers that it has permitted politicians and factional leaders to pick up the popular banner called "social gain." Such was one reason that business forfeited so many of its prerogatives to government—prerogatives which it is only just beginning to re-gain.

Realistic efforts on the part of all business and industry to strengthen and preserve our system of free enterprise, chiefly through recognition of their social and economic responsibilities, will do far more to spike subversive threats than all the Communist hunts now under way. Without such efforts, we might as well concede victory to the "isms"—and let the atom bomb do the rest.

There have been healthy sgns of a resurgence of social consciousness on the part of business; of more intelligence on the part of management and labor in their approach to mutual problems; of a relaxation of the government's tendency to run everyone and everything; of a growing consciousness on the part of the public generally as to what should constitute a sound and secure America.

We can hope that these trends will continue and that private enterprise will become an increasingly strong bulwark against those who might wish to step in and run our household for us.

W. A. PATTERSON,
President United Air Lines, Inc.

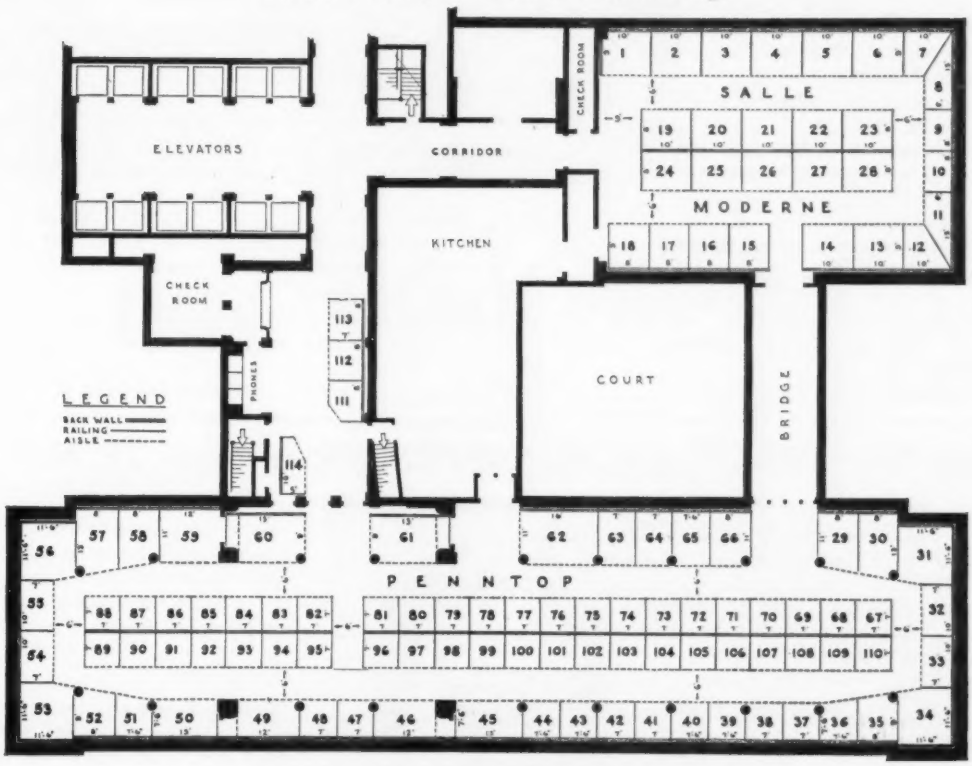
EXHIBIT PLAN

and list of exhibitors

Greater New York Safety Council

19th Annual SAFETY CONVENTION AND EXPOSITION

Hotel Statler — New York City



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(List continued on page 47)

See! Try! New PRACTI-KREME DISPENSER at Booth 78, N.Y. Show

Protection and Cleaning-BOTH!

Practi-Kreme is the original Skin Protector and Cleaner, in use for over twelve years — the only cream accepted by the U. S. Public Health Service as a combination protector and skin cleaner. It protects against more irritants than other creams of this type. It has always been self-removing — requiring only water for a quick, clean washup.

This PRACTI-KREME DISPENSER works!

Hundreds of these new attractive, sturdy Practi-Kreme Dispensers are already in daily use in all kinds of industrial plants They are trouble-free, rugged and economical in their use of Practi-Kreme. Placed near machines, they suggest use of Practi-Kreme as a protector before work — guarding workers against dermatitis. Then the same cream used again after work gives a cleanup unrivalled by liquid or scrubber soaps and at less cost.

CHECK THESE SAVINGS!

Practi-Kreme is 100% active protector-cleaner — contains no cornmeal, wood fiber or abrasive as do all scrubber soaps. Actual factory tests have proved that ONE pound of Practi-Kreme will clean as many hands as 2¼ lbs. of a nationally used scrubber soap. Practi-Kreme costs less in actual use!

We Loan You Dispensers Free!

First successful dispenser for Protective Cream and Skin Cleaner. Made for Practi-Kreme, protected by patent application, not for sale. Dispensers loaned free to Practi-Kreme users — another important saving for you. Refills easy to insert, last longer than other soaps.

The Practi-Kreme film that protects makes cleaning quicker and easier! Now management, safety and medical, can encourage workers to protect themselves against skin irritations because with Practi-Kreme and its Dispensers protection is an added dividend at no extra cost.

EXTRA FEATURES

Practi-Kreme is an oil emulsion — tends to prevent chapping in cold weather; cuts down washroom congestion when dispensers are near machines; is equally safe for women's skin; protects nails and cuticles where no scrubber can penetrate; safe on any part of the body.

WRITE TODAY

Complete information on request — no obligation — tests arranged in any plant.

CHEMICAL SPECIALTIES, INC., Springfield 9, Mass.

Metropolitan Distributors: Charles F. Hubbs & Co., N.Y.C. • Hubbs Paper Co., Inc., Mineola, N.Y. H. M. Royal Inc., Trenton, N. J. • Safety Specialists, Inc., Newark, N. J.

Dual operation in special order section of cutting department illustrates need for safety gloves and clothing.

GLASS - HANDLE WITH CARE!

By
CARL MINIDEO, Safety Supervisor,
Pittsburgh Plate Glass Company,
Mount Vernon, Ohio

AMONG the many industries faced with troublesome material handling problems, perhaps that of window glass manufacturing presents some of the most difficult since it requires considerable moving of the glass sheets by hand. It is significant however, that despite the ever-present possibilities of injury, our rate of cases requiring medical attention is exceptionally low. This is largely due to the general use of proper safety clothing and equipment.

In our safety program at the Mount Vernon plant for example, we have made much progress toward providing adequate protection for the hands of our glass cutters. This has been made possible through on-the-job tests of various types of coated work gloves conducted in our plant with the co-operation of a leading work glove manufacturer.

One of three plants operated by the company for the production of window glass, our Mt. Vernon factory employees normally approximate 1,000. Although workers in all divisions of the plant are equipped with modern protective clothing, this article embraces only those operations in the glass cutting departments where the recent tests were conducted. Tests were made in a

(Please turn to page 38)

Rough, non-slip coating of glove assures firm grip as cutter stacks lights of finished product.
(Photos: Courtesy Edmont Manufacturing Company)

Modern Safety Devices "De-Hazardize" Old Elevators

HAZARDS — ALL FLOORS!

GEORGE REPPERT, Engineer
Otis Elevator Company

CHANCES of being killed while operating and working around freight elevators could be reduced 75.6% if old-style elevator cars and hoistway doors were provided with modern safeguards available today and which are required by up-to-date elevator codes for new installations.

This is the conclusion of a recent analysis of the causes of 37 deaths that occurred during 1947 with all makes and types of freight elevators.

Little reduction can be expected in the number and severity of elevator accidents until something is done to reduce the hazards on existing elevators not equipped with proper safety devices, many of which have been running 20 years and more.

Of the 37 fatalities studied, 24 resulted from hoistway falls or from the crushing of the victims between elevator cars and hoistway walls where hoistways and cars were not fully protected or equipped with interlocks, car gates and gate contacts.

Opening improperly protected hoistway doors and plunging down the shaft killed 8; 10 died when struck by cars while leaning through unprotected hoistway openings. In these 10 fatalities, 6 of the cars were operated with old-style hand ropes. Lack of car gates and gate contacts killed 6 others at car entrances when they were caught between hoistways and moving cars.

Modernization of Existing Elevators

Widest field for increasing the safety factor of existing old-style freight elevators is to provide interlocks for all hoistway doors to prevent doors at any landing being opened except when an elevator is at that landing, and equipping all elevator cars with doors or gates and gate contacts. The latter are electrical contacts connected into the operating circuits and keep the car from moving until its door or gate is closed.

Elimination of old-fashioned hand-rope operation and substituting push-buttons or other modern controls would reduce by 50%, the number of accidents at hoistway entrances, on the basis of the accident study. Of the 26 fatal, serious and minor mishaps occurring at freight hoistway entrances, 13 were caused when victims were struck by cars while trying to start or stop them with hand-ropes.

The analysis showed 82% of serious and fatal accidents at freight elevator car entrances were due to lack of car gates and gate contacts.

Entrances Most Dangerous

Absence of interlocks on hoistway doors killed 6; and 4 others died by falling down hoistways after thoughtlessly tampering with interlocks.

(Please turn to page 40)

Portrait of a man setting the scene for trouble! Many accidents are caused by persons tampering with automatic safety devices designed to prevent elevators moving until doors are closed.

HERE'S WHY MORE AND MORE PLANTS ARE INSTALLING K-LENS-M DISPENSER CABINETS

THE MODERN GOGGLE CLEANING STATION

The worker with clear vision works more safely, more productively than the one whose sight is blurred by foggy, smeared goggles or face shield. K-Lens-M Dispenser Cabinets placed at handy locations encourage employees to keep their glasses crystal clear.

Takes but a second. Spurt spray of lens cleaner on glass and wipe with lint free tissue. All film, grease and dirt vanish. Non-inflammable. Inexpensive. Send for descriptive circular.

Cabinets are all metal. Handsome easy to clean baked enamel. Available in safety green or white.

THE WILKINS CO. CORTLAND 3, N. Y.

Here's the Handy DAYTON "ROLL-ALONG" SAFETY LADDER

IDEAL FOR THE STOCK ROOM

. . . The Dayton Roll-Along Safety Ladder with its rubber tired swivel casters can be speedily moved in any direction with practically no effort.

Safety shoes with renewable treads hold ladder permanently and safely in place while ladder is occupied.

Constructed of tested airplane spruce throughout and reinforced with steel braces for additional safety. Folds compactly for convenient storing. Available in sizes 3-ft., 4½-ft. and 6-ft.

Elevating auxiliary platform which folds back in main platform adds height if desired. These ladders are being used in many of America's largest plants. See for yourself! Write today for bulletin.

For Safety's Sake **. . . consult our SAFETY DEPARTMENT . . . we have the complete line of safety equipment for your every requirement.**

DAYTON SAFETY LADDER CO.

2337 GILBERT AVE., CINCINNATI 6, OHIO
IN CANADA—SAFETY SUPPLY COMPANY—TORONTO

For complete information, just check any or all items listed, and send us the coupon.

MAIL NOW

DAYTON SAFETY LADDER CO., O. H.
2337 GILBERT AVE., CINCINNATI 6, OHIO

GENTLEMEN:
WITHOUT OBLIGATION ON MY PART PLEASE SEND ME FOLLOWING CHECKED BULLETINS:

.....SAFETY LADDERS SHOES	.....SAFETY GASOLINE CANS	.....SALT TABLETS & DISPENSERS
.....SAFETY LADDERS	.....OILY WASTE CANS	.....SAFETY GOGGLES
.....SAFETY CLOTHES	.....EXCELSIOR CANS	.....GLOVES
.....ROLL-ALONG LADDERS	.....WATCHMEN'S CLOCKS	.....FIRE BUCKETS
.....FIRE HOSE	.....ACID PUMPS	.....ROCK UP RACKS
.....FIRE EXTINGUISHERS	.....RESPIRATORS AND PARTS	.....PLY"
		.....EYE SHIELDS

(Name) .....

(Company) ..... (Address) .....

TABLE 2—APPROXIMATE VELOCITIES CORRESPONDING TO SUCTION MEASUREMENTS MADE AS DESCRIBED IN SECTION "MEASURING AIR FLOW IN DUCTS"

Net Suction Reading-Inches Water Column	Approximate Duct Velocity Feet per Minute
¼ inch	1600
½ inch	2340
¾ inch	2780
1 inch	3200
1 ¼ inches	3600
1 ½ inches	3920
1 ¾ inches	4250
2 inches	4550
2 ¼ inches	4800
2 ½ inches	5050
3 inches	5550

These values are used on an entry coefficient of 0.8 Look for dust settlement in horizontal ducts where velocities are much less than 3000 feet per minute.

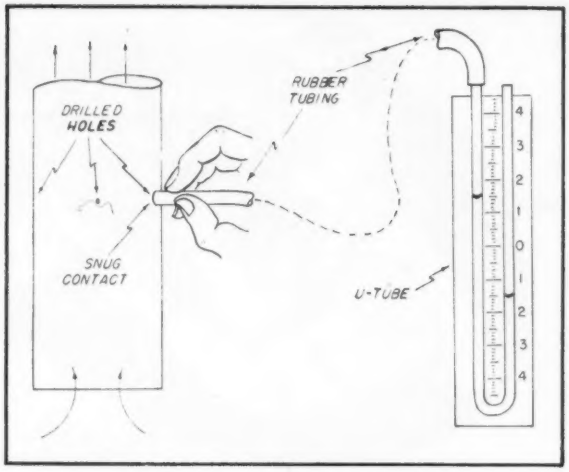


FIGURE 3—Method of measuring static pressure with a U-tube manometer, for estimating air flow in a duct.

SAFETY IN SANDBLASTING

(Part II)

From a manual prepared by Industrial Hygiene Foundation of America, Inc. for the National Industrial Sand Association

IT is of major importance that the duct system which transports the dust-laden air from the blasting units to the dust collector operate with minimum abrasive wear and dust settlement. Regular inspection and maintenance are required, but the need for too frequent attention indicates poor basic design and operation—the causes of which should be discovered and corrected.

Wear at Elbows

While a certain amount of abrasion is to be expected at elbows, it will be excessive if a branch duct inlet is so located that it removes large grains of abrasive. In blasting rooms the settling space behind the curtain wall minimizes this effect.

In sandblast cabinets a similar protection should be provided. It may sometimes be desirable to construct an exhaust vestibule of more spacious dimensions to permit more effective settling of heavy abrasive grains that ricochet into the space adjoining the mouth of the duct. This is illustrated in Figure 2.

Duct Velocities

While velocities of 3000 feet per minute in ducts are adequate to transport the dust, it is advisable to design for 4000 feet per minute.[1] Designs involving smaller ducts and velocities higher than these are wasteful of power.

Inspection of plant equipment should include a

(Please turn to page 41)

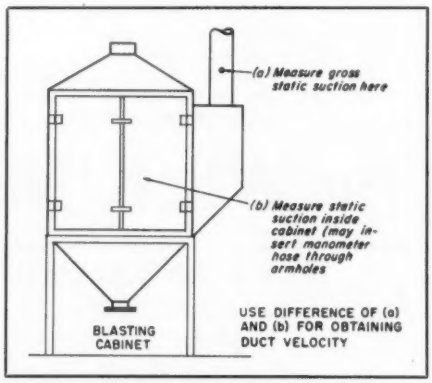

(a) Measure gross static suction here
(b) Measure static suction inside cabinet (may insert manometer hose through armholes
BLASTING CABINET
USE DIFFERENCE OF (a) AND (b) FOR OBTAINING DUCT VELOCITY

FIGURE 4—Measuring net static pressure in a branch duct connected to a blasting chamber, avoiding false reading at (a) due to suction in (b).

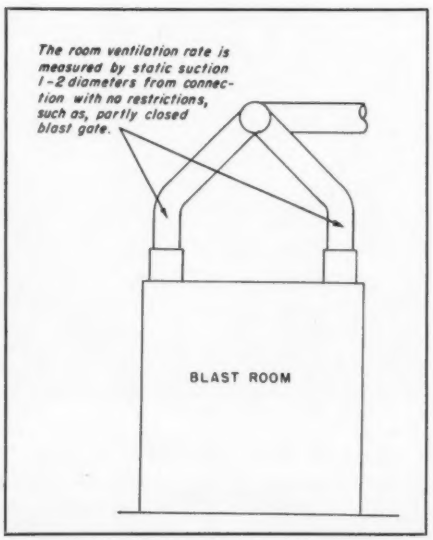

The room ventilation rate is measured by static suction 1-2 diameters from connection with no restrictions, such as, partly closed blast gate.
BLAST ROOM

FIGURE 5
Location of static holes for measuring static pressure in ducts from a sandblast room.

TABLE OF MATERIALS SUBJECT TO SPONTANEOUS HEATING

Prepared by N.F.P.A. Committee on Spontaneous Heating and Ignition

The following table lists some of the more common materials that are subject to spontaneous heating in varying degrees. The list is not intended to be entirely comprehensive and the omission of any material or combination of materials from the table does not necessarily indicate that these may not be subject to spontaneous heating. The table is based on ordinary atmospheric conditions that may be encountered in transportation and storage; it does not purport to include unusual materials under special conditions where abnormally high temperatures, etc., may exist. Such cases are beyond the scope of this present compilation.

Part 3

Name	Tendency to Spontaneous Heating	Usual Shipping Container or Method of Storage	Precautions Against Spontaneous Heating	Remarks
Oiled Fabrics	High	Rolls	Keep ventilated. Dry thoroughly before packing.	Improperly dried fabrics are extremely dangerous. Tight rolls are comparatively safe.
Oiled Rags	High	Bales	Avoid storing in bulk in open.	Dangerous if wet with drying oil.
Oiled Silk	High	Fiber Boxes, Rolls	Supply sufficient ventilation in storage.	Improperly dried material is dangerous when made into piece goods. Rolls relatively safe.
Oleo Oil	Very slight	Wood Barrels	Avoid contact of leakage from containers with rags, cotton or other fibrous combustible materials.	May heat on impregnated fibrous combustible matter.
Oleic Acid	Very slight	Glass Bottles, Wood Barrels	Avoid contact of leakage from containers with rags, cotton or other fibrous combustible materials.	Impregnated fibrous materials may heat unless ventilated.
Olive Oil	Moderate to Low	Tank Cars, Drums, Cans, Glass	Avoid contact of leakage from containers with rags, cotton or other fibrous combustible materials.	Impregnated fibrous materials may heat unless ventilated. Tendency varies with origin of oil.
Paint containing drying oil	Moderate	Drums, Cans, Glass	Avoid contact of leakage from containers with rags, cotton or other fibrous combustible materials.	Fabrics, rags, etc., impregnated with paints that contain drying oils and driers are extremely dangerous. Store in closed containers, preferably metal.
Paint Scrapings	Moderate	Barrels, Drums	Avoid large unventilated piles.	Tendency to heat depends on state of dryness of the scrapings.
Palm Oil	Low	Wood Barrels	Avoid contact of leakage from containers with rags, cotton or other fibrous combustible materials.	Impregnated fibrous materials may heat unless ventilated. Tendency varies with origin of oil.
Peanut Oil	Low	Wood Barrels, Tin Cans	Avoid contact of leakage from containers with rags, cotton or other fibrous combustible materials.	Impregnated fibrous materials may heat unless ventilated. Tendency varies with origin of oil.
Peanuts, shelled	Very slight or Negligible	Paper Bags, Cans, Fiberboard Boxes, Burlap Bags	Keep cool and dry.	Avoid contamination of rags, etc., with oil.
Peanuts, "Red Skin"	High		Avoid badly ventilated storage.	This is the part of peanut between outer shell and peanut itself. Precaution must be observed to provide well ventilated storage.
Perilla Oil	Moderate to High	Tin Cans, Barrels	Avoid contact of leakage from containers with rags, cotton or other fibrous combustible materials.	Impregnated fibrous materials may heat unless ventilated. Tendency varies with origin of oil.
Pine Oil	Moderate	Glass, Drums	Avoid contact of leakage from containers with rags, cotton or other fibrous combustible materials.	Impregnated fibrous materials may heat unless ventilated. Tendency varies with origin of oil.
Powdered Eggs	Very slight	Wood Barrels	Avoid conditions that promote bacterial growth. Inhibit against decay. Keep cool.	Possible heating of decaying powder in storage.
Powdered Milk	Very slight	Wood and Fiber Boxes, Metal Cans	Avoid conditions that promote bacterial growth. Inhibit against decay. Keep cool.	Possible heating by decay or fermentation.
Rags	Variable	Bales	Avoid contamination with drying oils. Avoid charring. Keep cool and dry.	Tendency depends on previous use of rags. Partially burned or charred rags are dangerous.
Red Oil	Moderate	Glass Bottles, Wood Barrels	Avoid contact of leakage from containers with rags, cotton or other fibrous combustible materials.	Impregnated porous or fibrous materials are extremely dangerous. Tendency varies with origin of oil.
Roofing Felts and Papers	Moderate	Rolls, Bales, Crates	Avoid over-drying the material. Supply ventilation.	Felts, etc., should have controlled moisture content. Packaging or rolling uncooled felts is dangerous.

(To be continued)

Plant Inspection System *plus*

Modern Equipment *plus*

Trained Fire Brigades *equals*

FIRE-SAFETY FOR OLDER PLANTS

HERE'S a fire protection job that has been successfully met and controlled at the main plant of Thompson Products Inc., world famous makers of automobile and aircraft pistons, wrist pins, pumps and other accessories.

Safety Director J. J. Elwood's responsibility of fire protection in 71 factory buildings covering about four city blocks and ranging in age from 10 to 60 years is not child's play. Most of these buildings are of wood and brick construction and range in height from one to five stories; offices are located midst a maze of winding hallways and twisting stairs. To further complicate the picture, the elevated tracks of the Pennsylvania Railroad run right through the center of the property, forming a 20 foot high concrete barrier with two narrow pedestrian tunnels. Busily populated with over 2300 employees, the magnitude of the fire prevention job in this plant is apparent.

Thompson Products Inc. was founded in a small building in this area in 1901. At that time there were 29 employees, but as the years went on the company grew with the expansion of the automobile and aircraft industries. As the company grew, they took over buildings of other companies engaged in a wide variety of manufacturing enterprises in this thickly populated area of Cleveland. Even the original building is still being used. However, the purchase of all the buildings in this area was not enough and today the company operates several plants in the Cleveland area, including the beautiful new plant in Euclid, Ohio, that employs over 5,000 men and women.

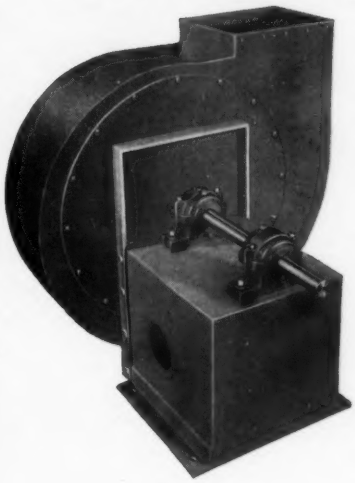
Flammable Products Add to Problem

The physical layout of the buildings is a fire protection problem in itself but, in addition, the fact that over 40 flammable elements are present in the various manufacturing processes makes the problem even more complicated. Here is a list of some of those elements:

Flammable Elements Present At Thompson Products

wood boxes	tar
excelsior	gasoline
sawdust	ether
cardboard	homo-carb
shredded paper	synasol
waxed paper	alcohol
cellophane	lacquer thinner
microfilm	paint
acetone	turpentine
oxygen	linseed oil
acetylene	varnish
paint remover	stain
kerosene	shellac
naphtha-sol	benzol
cutting oil	lubricating oil
quenching oil	paraffin oil
ammonia	grease

LOW-COST HEALTH AND SAFETY PROMOTER!



"Buffalo" INDUSTRIAL EXHAUSTER

Here's a "clean-up" fan that can improve the productive picture in your plant at so low a cost that it will pay for itself in a short time! "Buffalo" Industrial Exhausters remove harmful dust, grit, smoke, fumes, fogs, mists and gases quietly and efficiently. Sturdy all-welded construction means long years of continuous service with very little attention. Hundreds of plants have noted the real difference this cleaner air produces on the health, safety—and productivity—of their workers.

And, if you wish to remove materials, "Buffalo" Type MW Material Wheels are interchangeable with AW Air Wheels.

Better get the facts on this easy, low-cost way of plant clean-up. Remember—health means wealth in the plant!

Write for Bulletin 3576

"Buffalo" FIRST FOR FANS

BUFFALO FORGE COMPANY

529 BROADWAY BUFFALO, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont. Branch offices in all Principal Cities

VENTILATING FORCED DRAFT | AIR WASHING COOLING | AIR TEMPERING HEATING | INDUCED DRAFT EXHAUSTING PRESSURE BLOWING

NO GOOD on the WORKBENCH!

To Give Protection, Safety Goggles Must Be Worn

HERE'S WHY

SAF-T-SHIELD

ALL PURPOSE SAFETY GOGGLES

HAVE EMPLOYEE ACCEPTANCE

OPTICALLY CORRECT—No distortion, no eyestrain, no headaches. Wear over regular prescription glasses.

STRONG—Made of optilite, new optical safety plastic. Meets strict government specifications for impact and piercing resistance.

LIGHTWEIGHT—Comfortable, light to wear. Weight, only one ounce.

FULL VIEW—All plastic construction permits wide angle vision.

UNITED STATES SAFETY SERVICE CO.

Kansas City 6, Missouri • Branches in Principal Industrial Cities

An aerial view of Thompson Products Company's large Cleveland plant. *(K. Treer Photo)*

In spite of all these facts, Thompson Products has a fire record which makes it one of the safest places in which to work. Due to a thorough plant inspection system, adequate equipment and the existence of well trained fire brigades, the fire record from 1944 to 1948 was reduced 88%.

In 1948 the Cleveland Fire Department was called in only two cases and these two minor fires occurred in the oldest building of the group, where regulations of the company specify that outside help must be called regardless of the size of the blaze.

Equipment

The buildings are all adequately equipped with sprinkler systems supplied by two tanks holding a total of 100,000 gallons of water. All buildings have permanent steel outside ladders affording access to the roof. An alarm system with boxes conveniently placed throughout the plant connects with signal headquarters and the Cleveland Fire Department. In addition, a regular system of watchmen's patrol rounds covers all buildings. Watchmen are controlled and checked by the fire lieutenant with the aid of a patrol clock system.

The plant boasts one two-ton fire truck which has been equipped with a Hale 500 gallon fire pump. Carrying 600 feet of 2½ inch hose, and 200 feet of 1½" hose, ample length is provided by also strategically placing hose houses throughout the plant yard. All connections are standard Cleveland Fire Department connections. The truck also carries two 15 lb CO_2 tanks and 1½ quart carbon tetrachloride extinguishers, ladders, floodlights, fog nozzles and other standard equipment.

The extinguishers carried on the fire truck are augmented by over 600 located throughout the plant and offices. Each bears a sign plainly designating the contents and specifying the type of fires on which they are to be used. Most are placed at a height of about one foot from the floor so they can be removed with the greatest of ease and speed. All posts carrying extinguishers are painted red.

Special situations in the plant are equipped with installations to fit the need. The quenching room, which has a wooden roof, is equipped with a portable 50 gallon Foamite two-wheeled cart and a novel home-made portable dolly carrying four tanks of CO_2. In addition, there are two built-in CO_2 automatic systems with fully automatic heat actuator controls. One is installed in the transformer vault and one in the pump testing rooms.

Plant Fire Brigades

There are three plant fire brigades. The first consists of a full time fire lieutenant and two full time fireman. In addition, there is an "auxiliary fire brigade" of 216 men and women and an "outside fire brigade" of 68 men.

The fire lieutenant is the nominal head of these brigades and takes command at all fires. He is also responsible for all training and fire inspection, maintenance and servicing of all equipment, investigation of all fires, elimination of hazards, supervision of the signal system, fire fighting equipment, checking of clock patrolmen and providing fire precautions in all hazardous occupations such as welding, heat treating, etc. Actually, the entire responsibility for fire prevention and fire combatting falls to the fire lieutenant, under the direction of Mr. Elwood.

The "auxiliary fire brigade" is selected from workers in each area and the members are also the safety representatives for their own areas. Every 400 square feet of the plant has its auxiliary fireman and he in turn is under the command of the foreman in that area in case of fire. These auxiliary firemen are trained to turn in an alarm and to handle small fires that can be

controlled by hand extinguishers. They are not to assist in fires out of their own area, thereby holding production losses to a minimum, and also because they would be in the way of others. As soon as the outside brigade takes over, in case of fire, the auxiliary brigade in that area is required to leave.

Alarms are telephoned to the switchboard and relayed to the power house. A system of whistle blasts locates the fire by buildings location and floor numbers.

A most unusual feature of the brigade is that they have five women as members, chosen on the theory that they are also part of "the gang at Thompsons" and for the psychological effect they would have on other women in case of fire. They receive the same fire training that the men get and in several cases of small fires have successfully handled the extinguishers and controlled the blaze.

The "outside fire brigade" of 68 men is made up of all plant maintenance men and is under the command of the maintenance foreman. As they are always scattered throughout the plant while doing their work, some of them are bound to be near the scene as soon as an alarm occurs. They answer all whistle alarms and are identified by red badge inserts, which assists the fire lieutenant, foremen, and plant protection in clearing the area of all others who should not be there when fire occurs. They work under the fire lieutenant in subduing the blaze and after the fire is out they remain right on the scene to put the area back in order, so that a minimum of production loss is sustained.

Training

The fire lieutenant and his paid assistants take regular monthly drills in laying hose, making connections, running the pumper and practicing other functions of a regular paid fire department.

The auxiliary brigade meets every two weeks with their foreman as chairman. These meetings are held on company time and here are discussed problems that pertain only to their own areas. They are furnished material for discussions and cover such subjects as causes and control of other plant fires, use of various types of extinguishers, turning in alarms, etc. If there is an increase or decrease of machinery in their area, this is thoroughly discussed and consideration is given to the removal or addition of various types of extinguishers in that area.

The outside brigade holds meetings under the guidance of the maintenance foreman and the fire chief. Twice a year they take the fire truck to the lake front and practice making hose connections, laying hose, operating the pumper, etc. They are kept informed of all hazardous situations in the plant and of any changes that occur in various departments. Training of new members of this brigade falls to the fire lieutenant.

The guide for the training of both fire brigades is "The Handbook of Industrial Fire Protection" of the National Fire Protection Association and The Associated Factory Mutual Fire Insurance Companies' "Industrial Fire Department Recommendations." Both of these books are highly recommended for the training of any plant brigade.

Inspection

The paid firemen are responsible for a large list of daily inspections, all of which are a key to the fine fire record of the company. Here is a partial list of these inspections:—

1. Check entire plant for fire hazards, poor housekeeping, etc.

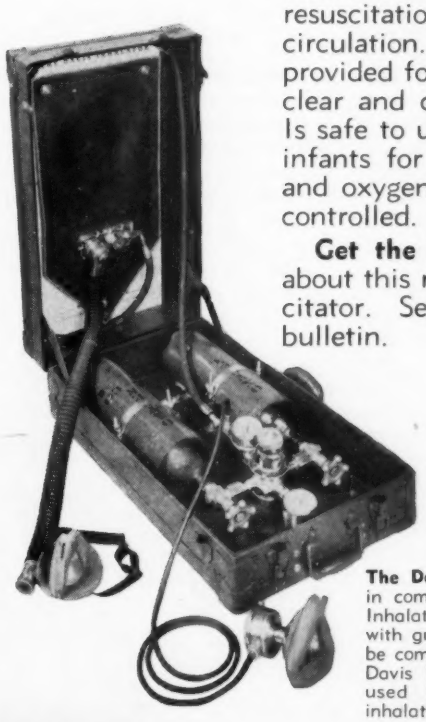
2. Check all fire extinguishers for accessibility, position and to see that the wire seal is not broken, showing use.

(Please turn to page 41)

AUTOMATIC, SAFE RESUSCITATION EVEN IN ADVANCED ASPHYXIA

. . . where muscle tone and nervous reflexes have disappeared. THE NEW DAVIS MIDGET RESUSCITATOR automatically and alternately introduces oxygen into the lungs . . . then draws it out **as in normal breathing.** Gets more oxygen into the blood stream for better resuscitation and increases circulation. Air aspirator is provided for keeping throats clear and clean of mucous. Is safe to use on adults and infants for the air pressure and oxygen percentages are controlled.

Get the complete details about this remarkable resuscitator. Send for our new bulletin.



The Davis Midget Resuscitator in combination with the Davis Inhalator with which it is used with great success. It can also be combined with any standard Davis Inhalator now in use or used independently of the inhalator.

SAFETY DAVIS DIVISION

DAVIS EMERGENCY EQUIPMENT CO., INC.

59 Halleck Street, Newark 4, N. J.

New PRODUCTS

NP-1 . . . GOGGLE CLEANING STATION—The self-contained, heavy-duty Sani-Spray Goggle Cleaning

Station is an atomizer designed especially for applying fog-proofing Sani-Spray Fluid. According to the manufacturer, the Allen Optical Co., plants from coast to coast are installing and featuring these stations for goggle cleaning. Simple, push-button control releases a fine atomized spray onto the goggle or face shield to be cleaned. The unit features an atomizer that will not rust because it is made of brass.

For further information please circle NP 1 on the special postcard enclosed in this issue.

NP-2 . . . FIRE DETECTOR — THERM-O-LARM Corp. have announced the manufacture of a unique, inexpensive fire guard. It is an automatic thermostat which is

said to make possible a low cost, dependable fire alarm system for any type building. It is factory set to ring a bell when the air around the unit reaches the danger point (about 140° F). THERM-O-LARM unit may be installed at each vulnerable place in the plant and all these units can be connected into one circuit with a single alarm bell at any chosen place.

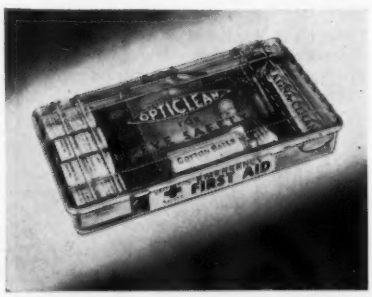
For further information please circle NP 2 on the special postcard enclosed in this issue.

NP-3 . . . PLASTIC EYE PROTECTION—For eye protection in woodworking, grinding, spot welding and similar light-duty operations, Willson Products, Inc., have added MonoGoggles to their line of personal protective equipment for in-

dustrial use. Made of a one-piece plastic lens, the MonoGoggle offers wide, clear vision and ample eye protection. These goggles are extremely lightweight, offer excellent impact resistance and low heat transmission of the lens, which greatly retards fogging. MonoGoggle frames for all styles (flat or curved lenses) are available in clear acetate and in the increasingly popular mottled brown Polythene, which retains its flexibility under extremes of temperature.

For further information please circle NP 3 on the special postcard enclosed in this issue.

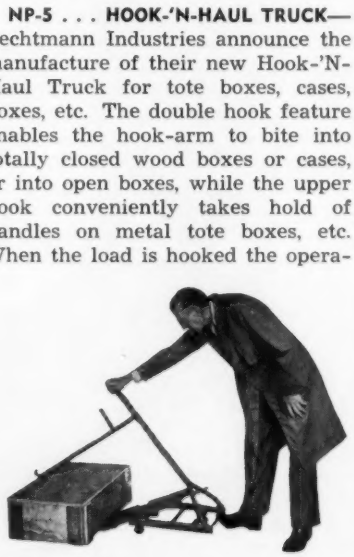
NP-4 . . . FIRST-AID EYE KIT — OPTICLEAN First Aid Eye Kit has been designed by Ohio First Aid &



Pharmacal Co. to eliminate many of the dangers of impromptu first-aid treatment for eye injuries. The kit contains 15 eye health items which include eye patch, eye pads, adhesive strips, eye droppers, eye cup, cotton balls, cotton swabs, eye drops, castor oil, boric acid solution, boric acid ointment, and the new MAGNA-CLEAN Eye Particle Remover. This last is a non-breakable plastic magnifier which locates particles and then mechanically removes the foreign object with a specially smoothened wire loop. All the items are visible in the sturdy plastic box, which is transparent and air-tight. Refill materials are readily available. All kits are prepared and assembled under the supervision of registered pharmacists. The item is unusually low priced.

For further information please circle NP 4 on the special postcard enclosed in this issue.

NP-5 . . . HOOK-'N-HAUL TRUCK— Techtmann Industries announce the manufacture of their new Hook-'N-Haul Truck for tote boxes, cases, boxes, etc. The double hook feature enables the hook-arm to bite into totally closed wood boxes or cases, or into open boxes, while the upper hook conveniently takes hold of handles on metal tote boxes, etc. When the load is hooked the opera-



tor merely pulls backward and the load slides easily onto the balanced tilting carrier plate. The powerful leverage principle employed reduces the operator's effort to a minimum. To discharge, a slight push with the hook-arm overbalances the carrier plate and allows load to slide gently to floor. Rugged, all-steel welded construction, the device is equipped

with one swivel and two stationary casters, either steel or rubber, and can be easily turned in its own axis.

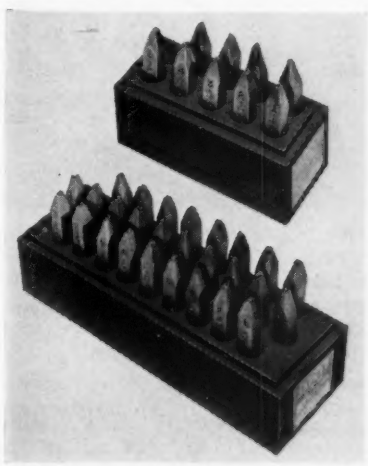
For further information please circle NP 5 on the special postcard enclosed in this issue.

NP-6 . . . HORSEHIDE SAFETY SHOE —A new Goodyear welt safety shoe, especially suited for wear by miners and electricians, has been added to the Iron Age line. It is made of genuine tan horsehide with uppers

cut from the shell of the horse butt. Even after being soaking wet, this shoe will dry out soft, according to the manufacturer, Iron Age Div., H. Childs & Co., Inc. The shoe has a heavy composition sole with vulcanized heel and stitched heel seat. Since no nails are used in its construction, this Iron Age safety shoe is particularly adapted for wear where the danger of electrical shock is present.

For further information please circle NP 6 on the special postcard enclosed in this issue.

NP-7 . . . SAFETY STAMPS — A completely new range of "S-T-M" Safety Stamps for reproducing raised letters and figures on plastic, glass or rubber products has been announced by the M. E. Cunningham Co. Made with perfect 30 degree bevel characters, these new S-T-M Stamps are designed and engineered to produce extra-deep, clear-cut stamping in metal molds for reproduction of precisely formed characters on finished molded products. These stamps are made from special Mecco Safety Steel, which assures long-service and provides added non-spalling and non-mushrooming safety features. Complete data sheets and price lists on the new Safety S-T-M reverse stamps are available.



For further information please circle NP 7 on the special postcard enclosed in this issue.

NP-8 . . . SAFETY LIGHT — The Braunson Mfg. Co. announce manufacture of a safety light which is especially designed to illuminate the entire side of a car or truck while making tire changes at night. This is accomplished by placing the light a few feet in the rear and to the side of the car or truck. The rear end of the box has a red lens as a

A Spectacle in Safety!

New Plastic Lenses Combine Lightness and Comfort with Durability and Protection

Safe-T-vis, a product of The Univis Lens Company, is made from a brand new allyl casting resin and is a brand new kind of eye protection.

It's Light! Two Safe-T-vis lenses weigh approximately what one case hardened glass lens weighs. This lightness, and the resulting comfort of Safe-T-vis goggles, means that workers wear them for 8-hour protection on the job.

It's Durable! The use of allyl casting resin permits much greater surface hardness. Surface scratching and abrasion is now a negligible factor while length of service multiples.

It's Resistant! Closely supervised field tests show Safe-T-vis' superiority in chief causes of industrial eye injury. In impact tests, it withstood the drop of a 7/8" steel ball from 200 inches. *Your own tests* will be convincing evidence.

Write for booklet containing details on the lenses that permit utilization of all of the good features of plastic . . . with none of the bad.

Safe-T-vis *8-hour Protection 8-hour Comfort*

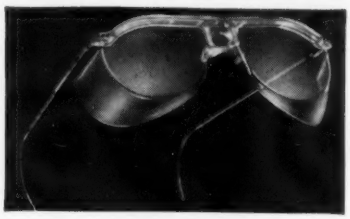
Lightweight Protective Spectacles

A product of THE UNIVIS LENS COMPANY, Dept. O. Dayton 1, Ohio

danger light and can be seen for a mile to warn traffic of danger ahead. An automatic reel holds 12 feet of portable cord with connector attached for mounting in a receptacle that can be permanently attached to the back plate of tail light of the car or truck to powerize the safety-light from the car battery. A reel holding 25 feet of cord is also available for use on large trucks.

For further information please circle NP 8 on the special postcard enclosed in this issue.

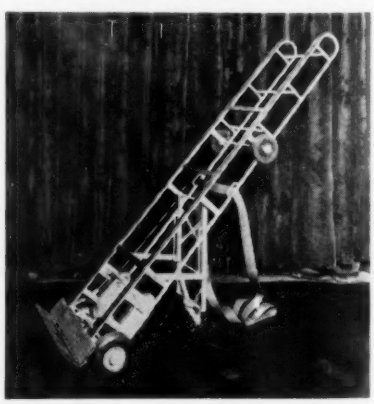
NP-9 . . . SPECTACLE TYPE GOGGLE — Watchemoket Eye Savers popular Tuc-Away model is now available with a completely new lens design that affords the wearer 92 to 96% protection. This, according to the manufacturer, is more than previously available in any spectacle-type goggle. This is accomplished with a double duty semi-cup lens design that provides full protection at sides and bottom—which leaves a narrow opening only



at the brow to eliminate dangerous fogging. Lenses are Watchemoket's shatterproof Impax plastic, optically perfect, and available in clear, light green, medium green, or dark green. The entire goggle weighs less than ⅝ ounce and is ideal for chipping and grinding operations. Manufacturer is Watchemoket Optical Co., Inc.

For further information please circle NP 9 on the special postcard enclosed in this issue.

NP-10 . . . STAIR CLIMBING HAND TRUCK—The Stevens Escort Truck has a caterpillar tread which literally crawls up a stairway, according to the manufacturer, Associated



Services. This revolutionary feature is found only on Escort Trucks. It is a rubber belt running on rollers set in an aluminum frame. The device has a capacity of 1500 lbs.

For further information please circle NP 10 on the special postcard enclosed in this issue.

Famous Du Pont PRO-TEK helps prevent time loss

PROTECT YOUR WORKERS' hands with Du Pont PRO-TEK, the hand cream that acts like an invisible work glove. When rubbed on the hands and arms before starting work, it guards the skin against paint, grime and insoluble cutting oils. And it's easily washed off with water when the job is done . . . takes all the grime with it.

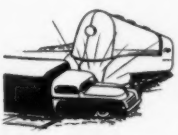
Order Du Pont PRO-TEK today. Or write E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
THROUGH CHEMISTRY

PRO-TEK
REG. U.S. PAT. OFF.
HAND PROTECTIVE CREAM

Non-listed Employee Injured In Scope of Employment

George Mayo, was employed to work for the Hunt's Theatres, Inc. to do hauling with his truck and special other work as those in authority directed him to do. It appears that his regular time of employment was 8:00 A. M. to 4:30 P. M. Sometimes he worked until 5:00 in the afternoon and stopped at 12:00 for lunch; drove the truck to his home, had his lunch and left his home about 12:25 to return to work at 12:30. On the day in question, he went home for lunch and remained a time thereafter to repair the muffler on his truck. His superior knew of the condition and had instructed Mayo to stop at the Wildwood Trust Company and remove some trash, and then return to one of the company's theatres and clean it; then to get some chairs at another theatre and take them to the theatres he was to clean. Mayo left his home to go to the bank, and as he passed over a railway crossing, was struck by a locomotive engine and was injured.



The company resists the claim on the theory that he was not being paid by them to take up the rubbish at the bank. There was no evidence, however, to indicate that at the time claimant was employed by the bank. He was accustomed to do as he was directed and at the time was told to pick up the trash by Mr. Hunt, who was the head of the corporation and obviously in authority.

As the claimant was on a mission directed by his employer, he was definitely in his employment with the company. In the absence of any proof to the contrary, it would have to be assumed that his injury arose out of and in the course of employment. The relation of master and servant exists wherever employer retains the right to direct the manner in which business shall be done as well as the result to be accomplished.

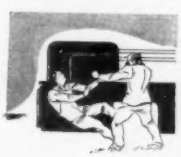
Claimant was an employee under the Workmen's Compensation Act and entitled to compensation notwithstanding the fact that he was not included in listing of employees, whose compensation was subject to reductions for social security, and etc.

Mayo -vs- Hunt's Theatres, Inc., Supreme Court of N. J. Appellate Div. November 8, 1948 61 Atlantic Reporter, Second Series, Page 738.

Plant Worker Killed In Fist-Fight

Willie Silas on the date of his death was employed by the Container Corporation. A roll of paper which was threaded around the rolls of a large drying machine broke. A fellow employee, Jim Petty, and a foreman went to the top of the machine to start threading the broken paper through the rollers. Petty, who had been working at that job only about three days dropped the sheet and it fell on Silas who was about two and one-half feet beneath him. Silas yelled, "No G. D. body is carrying that sheet up there!" Petty replied, "We all got to learn," and nothing more was said at the time.

Some thirty minutes later after completing the job of winding the paper through the machine, Petty went over to a place some distance from the drying machine where the earlier incident occurred, and remained there to cool off. Silas approached Petty there and in an abusive manner said he was going to cut his throat. When Silas said that, Petty struck him with his right fist and Silas fell down. Silas then got up and faced him again, and Petty again struck Silas with his fist. Silas went down again and as he did so, his head struck against a machine and as a result he sustained injuries which caused his death.



(Please turn to page 36)

Genuine PLY-GARB
VINYLITE PLASTIC
Protective Clothing

ACID, CAUSTIC, WATERPROOF
FLAME RESISTANT

Made of top quality materials to our own closely controlled formula, PLY-GARB is longer wearing than you ever believed possible. It's really tough—has considerably better resistance to abrasion, too, than other protective clothing. Available in a variety of weights to provide just the degree of protection you need.

Guaranteed
NOT TO CRACK OR PEEL

Because we use no cheap or reclaimed materials in the manufacture of PLY-GARB, we can guarantee satisfaction on your job.

Beats Rubber EVERY WAY

Weighs one-quarter as much, will last four times as long; yet the initial cost is lower.

WORKERS PREFER PLY-GARB

It's lighter weight and proportioned fit make PLY-GARB garments more comfortable to wear. Employee satisfaction means a great deal, too, because of less inclination to slight the use of protective clothing.

Full Line

APRONS	OVERALLS	SUITS
JACKETS	SLACKS	JUMPERS
SLEEVES	COATS	COVERALLS
HATS	LEGGINGS	CAPES

Write – for complete catalog

Manufacturers of PLY Skin Protective Creams and PLYGLOVS (Plastic Coated)

THE MILBURN Co.
3202 E. Woodbridge, Detroit 7, Mich.

. . . And Sudden Injury

Arrow points to man caught in conveyor belt. Workmen are using an acetylene torch to help free him. A fellow worker is bent under the doubled-up body of the victim so the trapped man can rest on him during the one hour and twenty minutes it takes to free him. Oiling a conveyor belt, the victim slipped and fell into the hopper conveyor. *(International News Photo)*

And Sudden Injury

How long is eighty minutes

If you're taking in a good movie with the wife, or if you're bowling for first place with the gang, eighty minutes goes by like eighty miles an hour. You're surprised how fast time goes!

But if—for eighty minutes—your entire arm was jammed inside a machine, if—for eighty minutes—you'd watch your own blood drip from your mashed arm and ooze through steel gears, you'd think of eighty minutes as you'd think of eighty years. Eighty minutes would seem an awful length of time to the fellow with the acetylene torch trying to cut you free, and an awful length of time to the men trying to keep your weight off the remains of your arm. And between fainting spells the thought might flash across your pain-numbed mind that this agonizing eighty minutes wouldn't be happening to you if you'd only taken a very short and painless half-minute to shut off the power before oiling the machine . . .

From numerous reports, safety engineers realize the danger of oiling machinery while in motion and, of course, install guards where required. One method used to eliminate the hazard is by installation of permanent automatic oiling devices on machines and at points needing regular lubrication.

Where such systems are impractical, operators and maintenance crewmen should be educated as to the hazard. Instructions should be given—and enforced—that all moving machinery, belts, conveyor and other moving parts should never be lubricated until power to the machine has been cut off. Because much of the periodical oiling can be done during hours when machines are idle, this practice need not affect production schedules. But this practice of safety, even on the production line, will pay for itself many times over if it prevents only one such accident as described above and illustrated to the left.

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There is nothing to indicate that either of the two parties had any previous trouble between them, before the time that Petty dropped the sheet of paper on Silas. The principal question presented is whether or not the death of Silas arose out of and in the course of his employment.

It has been sometimes held that where men are working together at the same work disagreements may be expected to arise about the work, the manner of doing it, as to the use of tools, interference with one another, and many other details which may be trifling or important. Infirmity of temper or worse may be expected, and occasionally blows and fighting. Where the disagreements arise out of the employer's work in which two men are engaged, it has been inferred that the injury arose out of and in the course of employment. The facts of the instant case do not, however, prove the application of the above law.

At the time Petty dropped the paper on Silas, an incident might have occurred to which such rule would be applicable, but it did not. The men continued their work and completed the job. Petty went over to lean against the hand truck and cool off. From the time that he had replied, "we all got to learn", until Silas approached him at the hand truck some thirty minutes later, they had had nothing to say to each other. At the time the fatal injuries were inflicted, neither of the parties were engaged in the duties of their employment. Silas was not then and there serving his employer's interest, and, therefore, there was no casual relation between the character of the employment and the injury. The risk of injury to himself was created by him at the time that he sought out Petty in the vicinity of the hand truck.

Silas was the aggressor and the quarrel was not connected with his employment or the manner of doing the work. An employer is not an insurer of the safety of his employees during the period of the employment.

Claim denied.

Container Corporation of America vs Industrial Commission, Supreme Court of Illinois, Sept. 24, 1948, 81 N. E. Second, Page 571.

Injured in Company Car

Claimant was injured while riding in an automobile owned and operated by the company in transporting employees to work during a street car strike. The car in which claimant was riding struck a car operated by the Ohio Bell Telephone Company.

The Commission held that since the company had provided transportation for its employees and the car was owned by the company and operated by one of its employees for the purpose, that when the employee entered the vehicle, she was in a sense in the employ of the company.

The fact that it was an emergency should be considered and when the employee accepted the provisions made by the employer to transport her from her home to her place of employment and return, that she was doing an act for the benefit of her employer and was under the circumstances in the course of her employment at the time of the injury. As a consequence, the claim was allowed.

Federal Glass Company of Columbus, Claimant—Evelyn L. Steward, Claim No. S. F. 1738188
Industrial Commission of Ohio

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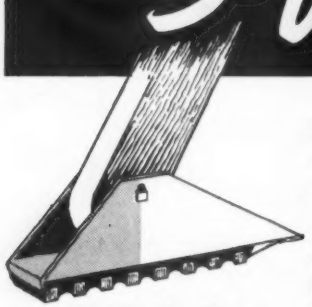

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Window Cleaners' Belt, bolt type: Will stop maximum fall safely, with minimum shock load on building anchor.

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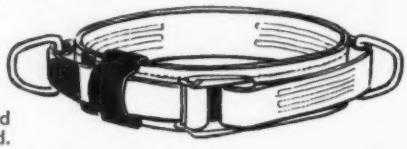

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SAFE-HI Shock Absorber for Safety Belts: Insures a gradual friction stop without jolt or rebound. Makes high work safe; falls harmless. Meets U. S. Govt. specification 419 fully.

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INDUSTRIAL
Accidents in the News . . .

These accidents are taken from the pages of the nations Newspapers. They've all happened—they didn't have to!

Passaic, N.J., Herald-News:

Two men were injured when a crane cable with which they were working broke on a dock at the rear of the Manhattan Print Works, South Street, Passaic. Julio Mobilio, 58, was held at Beth Israel Hospital for treatment of a possible fracture of the nose and bruises, and Frank Pachel, 42, was treated for bruises of the right arm and leg, and upper right thigh, and released. Police said the men were struck, not directly, by both the cable and a girder it was carrying.

Prevention:

Cable Slings of reputable manufacturers have ample reserve strength when properly used. However, after a sling has been used for any length of time, it is advisable to inspect for broken wires, kinks, or damaged fittings. If the sling has deteriorated to any extent and is thought to be unsafe, it should be discarded. It is assumed that they should be discarded when the number of broken wires in a distance of one rope lay reduces the original rope strength 25 per cent, or when the number of broken wires per rope lay equals the number of wires in one strand. Sling fittings in many cases can be salvaged and used on new replacement slings. An article on proper sling use appeared in the January, 1948 issue of this magazine.

◆

Sacramento, Cal., Bee:

Robert Thomas Wagoner, 21, nearly cut in two when he fell onto an 18-inch whirling circular saw, will be buried here at 2 P.M. Tuesday. Deputy Coroner W. C. Manes said Wagoner, a naval veteran of World War II, lost his balance while at work and fell into the saw. The blade, Manes reported, slashed Wagoner across the chest and came within an inch of severing his body.

Prevention:

In the March, 1948 issue of this magazine appears an article on guarding saws. This article pictures several types of guards, one of which if installed on the saw mentioned in the above news item, would have made such a terrible accident nearly impossible. Rip, or edging saws, are especially deadly and should always be properly guarded. Such guards can be purchased ready made or custom-built to fit individual requirements.

◆

Covington, Ky.:

Lyle Harrison, 20, of Newport, suffered a possible left hip fracture yesterday when he fell down a flight of stairs at the Beatrice Creamery Co., 140 Carr St., where he was working, police reported. He was taken to General Hospital.

Prevention:

Materials which retain effective anti-slip qualities for a long period of time, even under severe traffic should be used in the construction of stair treads. Employees should not attempt to climb stairs with a heavy or poorly balanced load in their arms. They should be instructed to use handrails, which should be of sound construction. Plenty of light should illuminate all stairways. Intermediate landings should be built into any long flight of stairs to break impetus of force of falls and to afford a resting place for those climbing with loads.

◆

Wichita, Ks., Morn. Eagle:

Two men were injured when laying brick on the second floor level of the Immanuel Baptist church, 1400 South Broadway when the scaffold on which they were standing collapsed, dropping them to the ground. Taken to St. Francis hospital were D. F. Sanders, 26, who suffered fracture to both arms and lacerations to the face and M. W. Schmedeman, 38, who received an injured hip.

Prevention:

Proper construction of scaffold. Breaking of scaffolds usually results from use of poor material, lack of suitable supports, or the overloading of the structures. Only the best materials should be used in scaffold construction. Condition of scaffold should be inspected frequently. Scaffolds should be strong enough to carry the loads to which they will be subjected. Barrels, boxes, or similar materials should never be used as supports for scaffolds. Flooring of scaffolds should be constructed to avoid overlapping at unsupported points. Planks in use across a span of 12 feet or more should be wired with not less than No. 11 gage annealed wire.

◆

Salt Lake City, Utah, Tribune:

Caught in the gears of a rubber press machine at the Thermoid Co., Nephi Division plant, the left hand of Eugene Lunt, about 41, was badly mangled and had to be amputated just above the wrist at a Payson hospital Wednesday. The accident occurred as Mr. Lunt was wiping the gears on a colander of the rubber press. The cloth he was using caught in the gears, pulling his hand into them.

Prevention: Never oil or wipe parts of machine in motion! Accounts of this type accident come into this magazine each month and all of them can be classified as preventable. Before oiling or wiping operations the power to the machine should be cut—the switch locked or hazard sign attached—so there is no chance of the wiper being caught in machinery by some person turning on the power.

GLASS—HANDLE WITH CARE!
From Page 21

section of our glass cutting department where an average of 170 highly skilled operators are responsible for cutting the various strengths of glass sheet into sizes as specified on the orders. Sheet sizes of the manufactured glass range up to approximately 57½ inches by 90 inches. The sharp edges of the sheets constantly expose the cutters to possible injury of the hands and arms, thus necessitating the use of the toughest, cut-resisting gloves and protective sleeves. The need for these items is exemplified in the accompanying photos which depict the normal operations of the glass cutters.

The cutter lifts a 57 inch by 88 inch sheet of single strength window glass from manufactured stock. After moving the sheet to a felt-covered cutting table, the operator scores the glass with a diamond point cutting tool. Again handling the sheet, he breaks off the individual lights of glass, then stacks the 28 inch by 30 inch lights, ready for inspection. In some instances, two operators work side by side. Here, both cutters are required to move the large, 74½ inch by 84 inch sheets to the cutting table. The cutter (foreground) is breaking off a trim strip, while his partner (background) scores his sheet to specified light sizes.

The tests revealed that conventional gloves did not provide sufficient hand and wrist protection for a long enough period on the cutting operations. Then too, they offered insufficient resistance to the cutting action of the sharp edges of the glass sheets, and the gloves soon became worn to the point of no longer being useful. It was also found that in most cases, ordinary types of work gloves did not offer a firm grip when the sheets required handling on their flat, slippery surfaces.

Special Gloves

To overcome these difficulties, the manufacturers recommended a natural rubber palm-coated work glove with a rough finish as worn by the cutters shown in the photos. This style glove, with natural rubber welded to a strong fabric lining, proved by actual test to outwear several pairs of other types of gloves and offer more complete protection to the hands and wrists. Also, the rough finish presented an ideal non-slip grip—so essential in the handling of our product. An elastic band across the back makes them fit comfortably and stay on the hands.

Sleeve Guards

Shoulder length sleeves worn by the cutters are a special design developed by us to give full protection to the arms and shoulders. Made of specially developed and treated cloth, the sleeves are studded with lightweight, non-corrosive aluminum grommets properly spaced to provide ventilation and resist the cutting action of the glass. They have proven very satisfactory from the standpoint of both protection and comfort in wearing. The special sleeves are now in general use, and we are in the process of adopting the recommended work glove for the use of our entire staff of glass cutters.

These advancements are consistent with our regular safety program designed to facilitate production and reduce hazard to the worker throughout our operations—"Safety is no accident".

A few of many types — Plastic, Natural Rubber and NEOX coatings

1. Extra heavy duty NEOX-coated glove with 14" gauntlet that turns up to prevent drip. (Redmont).
2. Flexible weight NEOX-coated with knit wrist (Edmont) Also, very flexible plastic-coated gloves (Liquid-Proof).
3. Very flexible, sure grip, rough-surfaced natural rubber, coated all over or with ventilated fabric back (Grab-it).

Order from your safety equipment or industrial supplier

Better hand protection and 25% longer wear—

with new **NEOX*** coating

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GLOVES

***NEOX liquid-proof coating** combines the resiliency of neoprene with the extreme durability of plastic. In handling sharp or abrasive materials where oil, grease, acid, caustic or solvents are destructive factors, NEOX outwears other resistant materials at least 25%.

High tensile fabric lining, to which the tough NEOX is chemically welded, insures a snag-proof glove, eliminates the discomfort and irritation of rubber-to-skin contact, makes gloves easy-off, easy-on.

Workers like them for the above reason, plus the wide thumb span and correctly curved fingers that permit free hand action and easy grip. They're comfortable and *safe.*

SPECIAL TEST OFFER — Send brief description of your operation, materials handled and temperature conditions. We will forward samples of the type gloves we recommend for comparative test and report. Address

Edmont Mfg. Co., 514 Orange St., Coshocton, Ohio

World's largest manufacturer of coated industrial gloves

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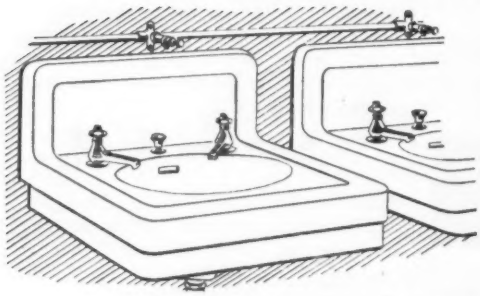

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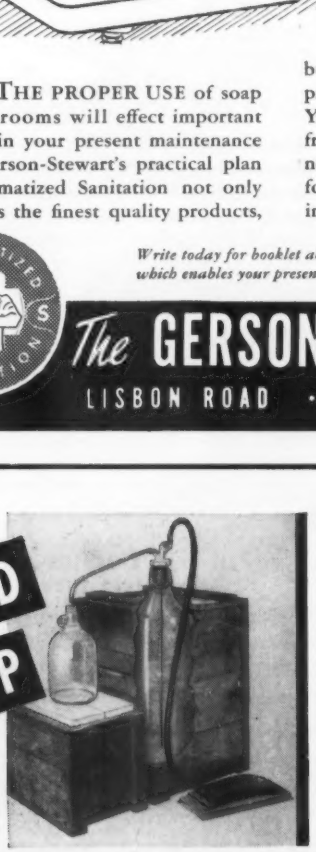

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From Page 22

Of the 37 fatal and 39 serious freight elevator accidents studied, 55.2% occurred at hoistways and car entrances while 75.7% of all fatal freight elevator mishaps were at those locations.

Excluding hoistway and car entrance accidents, only 4 injuries occurred 2 fatal, 2 serious to freight elevator riders. All 4 were hurt when hoist ropes broke. Three of the victims were on elevators with drum type machines and one was killed on an old-style steam hydraulic elevator. No accidents were reported due to breakage of hoist cable on a traction-type machine.

The 5 fatalities and 3 serious injury cases under the heading of "miscellaneous" with freight elevators were caused largely by carelessness. One man working on top of a car was killed when he stuck his head under a descending counterweight. Two were killed at work in an elevator pit when struck by a counterweight not protected with a screen.

Existing elevators can be modernized and their safety materially increased without completely new elevators or hoistway construction. A comparatively small expenditure, based on first or replacement costs, will result in a reduction of 64.5% in the serious and fatal freight elevator accidents.

COMING SAFETY CONVENTIONS . . .

April 5-9, Detroit, Mich.

Seventh Annual Meeting of the American Association of Industrial Nurses, Inc. (Book-Cadillac Hotel).

April 19-21, Pittsburgh, Pa.

Twenty-fourth Annual Safety Engineering Conference. Harry H. Brainard, executive manager, Western Pennsylvania Safety Council, Chamber of Commerce Building, Pittsburgh 19, Pa.

May 17-20, Detroit, Mich.

Nineteenth Annual Michigan Safety Conference. (Book-Cadillac, Leland and Fort Shelby Hotels). R. P. Douglas, president, 14250 Plymouth Road.

June 7-8, Baltimore, Md.

Maryland Statewide Safety Health Conference and Exhibit. (Lord Baltimore Hotel.) Joseph A. Haller, director of safety, State Industrial Commission, Equitable Bldg., Baltimore 2, Md.

FIRE SAFETY
From Page 29

3. Check all sprinkler valves to be sure they are open and that the wire seal has not been broken.

4. Check yard hose stations for hose, tools, etc.

5. Check water pressure on sprinkler risers.

6. Check fire doors for proper working order and for obstructions.

7. Inspect fuel pump room.

8. Check exit signs, exit light and fire escapes.

9. Check gas storage room and other hazardous locations.

10. Inspect alarm system and check watchman's record of rounds.

At less frequent periods gas masks, ladders, water tower, batteries, floodlights and other equipment are checked. Every three months the fire lieutenant accompanies the inspector for the associated Factory Mutual Insurance Co's. on a complete tour of the plant; this occupies three or four days and is a splendid double check on all existing plant fire problems.

Excellent relations are maintained with the Cleveland Fire Department. The plants lie about equidistant from three fire houses, all of which are under one battalion chief. The chief is invited to the plant for lunch at least once each three months with some of his assistants. This not only promotes good will but enables the company to keep them informed of any new or increased hazards at the plant and to keep them posted on the plant layout. This is a splendid idea that could be adopted at many plants.

Preparation is the Answer

The problem that exists at Thompson Products is the same as in hundreds of other plants in this country, to a greater or lesser degree. Thousands of our factories are fifty years old or older, and many are built of wood or wood and brick. Yet the fire loss can be kept at a minimum by adequate preparation for fire. Thompson Products has done the job and continues to do it by ample fire brigades, thorough training, large amounts of fire fighting and fire prevention equipment properly placed, and continuous and complete inspections.

SAFETY IN SANDBLASTING
From Page 24

regular check on the condition of the ducts to make sure that they are free of settled dust. (This may often be accomplished by tapping horizontal sections of piping with a hammer or weight, and "listening" —i.e., noting the nature of the resulting vibrations—with tips of the fingers of the other hand.) If accumulations are found, it is not sufficient merely to clean them out. Properly designed and maintained dust exhaust systems are self-cleaning and, therefore, the cause of the settlement should be ascertained and corrected. The fundamental cause of settlement is insufficient air velocity in the duct—i.e., below the minimum required for transporting the dust, probably 3000 feet per minute in sandblasting installations.

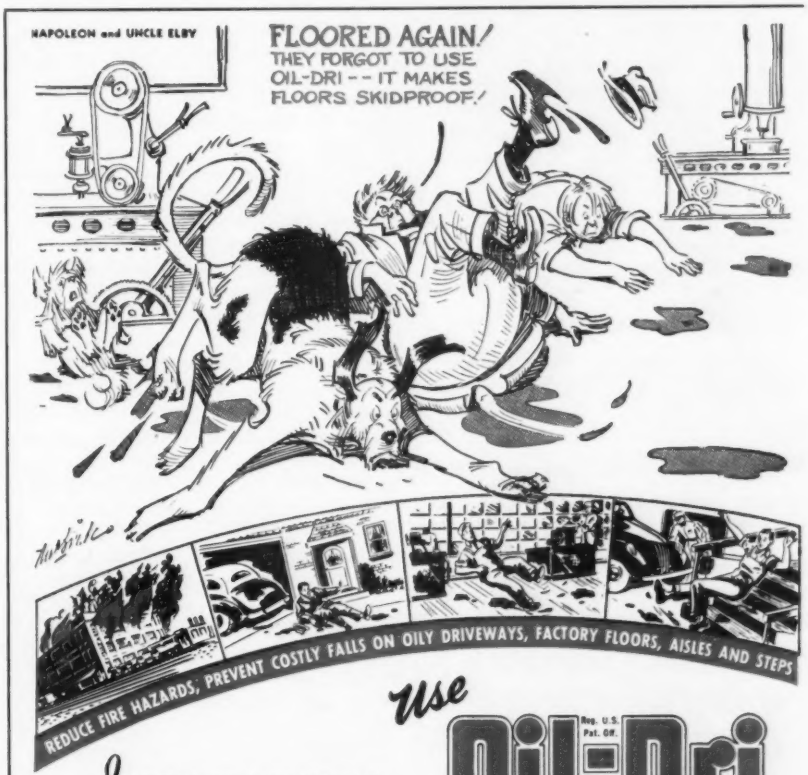
Among the common causes for this condition are the following:

(1) Air flow rate less than designed, due to improper speed of fan, but with proper duct size.

(2) Oversize ducts for designed air flow rate.

(3) Greater than anticipated pressure drop across cloth dust collector at end of operating cycle.

(4) Cloth dust collector with in-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sufficient cloth area for quantity of dust to be handled.

(5) Inattention to periodic operation of cloth dust collector shaking mechanism.

(6) Mouth of duct poorly located or not well baffled, permitting it to pick up excessive amounts of heavy material.

(7) In the duct system design, use of small diameter ducts in a system that includes branches much larger in diameter, without proper balancing in accordance with different friction losses.

(8) Closing off unused branches as by shutting blast gates.

Checking for Causes of Plugging

Following is an outline of procedures for ascertaining causes of settlement in ducts:

(1) Refer to previous information on recommended ventilation rate for the particular sandblasting apparatus being studied. Observe diameter of duct serving the equipment, and calculate probable design velocity by dividing recommended air flow, in cubic feet per minute, by square feet of circular duct area. This value should be greater than about 3000 feet per minute. However, avoid final conclusions until velocity measurements are made because the actual flow may be much greater than recommended, giving adequate velocity.

(2) Compare areas of branches with that of the main duct following their junction, up to dust collector, to establish that no section of duct work is grossly oversize. (Areas of mains should be approximately equal to branches leading into them.)

(3) In procedure 2, omit area of any branch that is closed off because of disuse either by plugging or by blast gate closure. Blast gates in branch lines that can be adjusted from full open to closed, are often the cause of trouble because when closed the down-stream section of the main is too great in area for the the active branches; consequently the velocity is lowered in the main. If the blast gates are employed in a system they should be adjusted so that suction readings in all branches are about equal, then they should be riveted in that position to avoid further adjustment. If subject to abrasion they should be of heavy plate.

(4) Note the sizes of various branches, diameter and length. If there are extremes of diameter leading to the same main, (e.g. 4 inch branch versus 15 inch branch)

"Calling All Hands"
FOR
PREVENTO
Protection!

Chemical irritants in cutting oils are an ever-present threat to sensitive hands. To help eliminate the hazard of skin irritations which may lead to dermatitis, hands need a protective coating — applied BEFORE working periods so that it affords full protection between hand washings.

PREVENTO provides such a coating. Different types are available for different cutting preparations and shop conditions.

PREVENTO is convenient to use . . . spreads quickly . . . gives hours of dependable protection . . . has a refreshing odor . . . vanishes upon washing. Here's low-cost insurance against slowdowns and lost working hours resulting from painful skin irritations.

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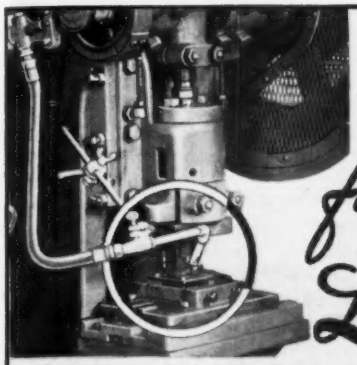
WESTPORT, CONNECTICUT



Save fingers! Littell

AIR-BLAST VALVES

—they'll do the job! They automatically eject pieces up to 2 lbs., depending on width of nozzle used and air pressure. They keep hands out of danger zone, as pieces can be fed into press with Littell Vacuum or Mechanical Pickers. Air operates only 1/10th the complete cycle of press—saving air.

Cam is adjustable and fastens to end of crankshaft—timed so that pieces are ejected as freed. Air nozzle is adjustable to any height or position. Littell makes a complete line of press-room equipment, such as Reels, Roll and Dial Feeds, Straighteners, etc.

REQUEST BULLETIN

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Stanzoils

Grip Oily Things As If Dry!

Liquid-Safe Hands Do Better Work...

Most rubber or neoprene gloves are slippery as wet eels — but not neoprene Stanzoils. Marvelous non-slip finger finish grips oily work as if dry, gives workers assurance and speed. Made of Du Pont neoprene, these gloves far outlast rubber, protect hands in harmful materials at extra low cost per day. Stanzoil hand safety pays you in more production, less costly injury claims. Also available in white neoprene. Write today for informative catalog.

Synthetic Rubber Division
The Pioneer Rubber Company
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STANZOIL BY PIONEER

OVER *30 Years* OF QUALITY GLOVE MAKING

Save on SHUTDOWN TIME with Scott Air-Pak – when toxic hazards threaten

Instantly ready for use with an ample supply of cool, confidence-inspiring AIR (not oxygen) the Scott Air-Pak permits rapid, thorough emergency work in toxic areas with minimum production "time-out" required.

In addition, Scott Air-Pak models in Back-Pak, Senior Sling-Pak (illustrated) and Extension Hose Assembly provide selectivity of equipment for particular operational or emergency needs.

ESTABLISHED IN 1932
Scott
FOR SAFETY – FOR SERVICE

Write for full information on Scott Air-Paks and name of nearest distributor—TODAY!

SAFETY EQUIPMENT DIVISION
SCOTT AVIATION CORP.
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Skin Irritations

EFFICIENCY IS SKIN DEEP

You can't expect top production efficiency when *skin irritations* plague your plant workers—causing *absenteeism* and *slow-downs*. TARBONIS has a long record in hundreds of plants for overcoming and guarding against the recurrence of *skin irritations*.

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Please send me a sample of **TARBONIS**

COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE____
BY_____ DEPT.____

(Continued from page 42)

there is reason to suspect that the velocity in the smaller branch is too low for dust transport; or that excessive, i.e., wasteful, air flow is passing through the larger one.

(5) Measure such in each branch (as described in section "Measuring Air Flow in Ducts") with especial attention to whether adequate velocities prevail in the smaller diameter branches. From these figures, calculate total air flow, cubic feet per minute, for system. If dust collector is a cloth filter, measure pressure drop at beginning, midway and end (just before cloth shaking) of the normal operating cycle.

(6) To determine pressure drop across the filter, measure static pressure *in the collector casing* on the dusty side (inlet end) and on the clean side (fan end). The difference is the pressure drop across the filter. These measurements should be obtained at the beginning, midway and end of the normal operating cycle.

(7) Calculate the "cloth resistance factor" by reference to the square feet of cloth area of the collector. Multiply the pressure drop (inches of water) by cloth area (square feet) and divide by exhaust rate (cubic feet per minute). If the result is much greater than 0.8 to 1.0 it is excessive and may be caused by mechanical deficiencies in the shaking mechanism or, if an old type flat bag collector, to partial collapse of the cloth envelopes during operation. Renovation is the best remedy in the latter case.

(8) From the data of (6) and (7) compare initial duct velocities and air flow rates with those midway and at the end of the cycle. Initial air flow should be much greater than minimum requirements.

If minimum requirements are just met at the midway point of the operating cycle, consider new shaking schedule in which a 5 minute shut down of blasting is arranged to permit shaking dust collector at half the present operating time. Otherwise the dust collector should be enlarged.

Measuring Air Flow in Ducts

The velocity of air in branch ducts is readily estimated to a satisfactory degree of accuracy by measurement of static suction with a U-tube manometer. The reading in inches of water may be converted to duct velocity by reference to Table 2. Air flow rate in cubic feet per minute (cfm) is obtained by multiplying duct velocity by area of the duct in square feet.

Technique of Measurement

In measuring the static head at the connection of a duct to a chamber, a small hole is drilled in the wall of the pipe a distance of 1 to 2 diameters away from the duct junction (See Figures 3, 4 and 5) and the free end of a rubber tube, connected to a glass U-tube or manometer, is held with the fingers tightly against the wall of the pipe, covering the drilled hole (see Figure 3). The difference in height of the water columns in the manometer is measured and recorded and the velocity determined from Table 2. The contact between the end of the rubber tubing and the wall of the pipe must be snug. Moistening the end of the rubber tube is helpful. Rubber tubing having a fairly thick wall is more convenient for the purpose than light-wall tubing.

A hole approximately 1/16 inch in diameter is convenient, although the size of hole is not of critical importance. *The hole should not be punched,* since the inwardly projecting jagged edges of metal disturb the air stream, and the true value of the static suction is not obtained. In drilling the hole, the small burrs sometimes formed have a similar effect, although much less serious. To insure most accurate results, such small metal turnings should be broken off. This is easily done after penetrating the pipe wall by revolving the axis of the drill in a spiral while rotating the drill itself.

Here's protection against those forgetful moments when tragedy lashes out to claim its toll.
The Junkin Safety Guard is effective . . . dependable. It can't "forget" because it's built in . . . actually becomes a part of the press itself.
That's how Junkin is helping thousands of satisfied users set up better safety records . . . higher production records.

If you would like the facts about Junkin Safety Guards, write us. There's no obligation.

Write For This New Bulletin

JUNKIN SAFETY APPLIANCE CO., INC.
930 W. HILL ST., LOUISVILLE, KY.

JUNKIN SAFETY GUARD

Manhattan Rubber Safety Slogan Contest

"Only YOU Can Do Your Job Safely" is the winning 1949 safety slogan out of nearly 1,000 submitted at the Raybestos-Manhattan, Inc., Manhattan Rubber Division plant at Passaic, New Jersey. The

slogan was the prize winner in a plant-wide contest conducted as part of an aggressive interplant safety campaign. Three large billboards at the gates of the plant carry the new slogan.

Accuracy of reading is further improved by taking readings at more than one hole at different locations around the circumference of the pipe. This is especially important where it is necessary to make a measurement following an elbow or other pipe fitting causing excess turbulence. The average of such readings is to be taken unless, for example, one out of three or four readings is widely different from the others, when it may be discarded.

In measuring exhaust rate for a blasting cabinet where the cabinet itself may be under a considerable suction, that value should also be obtained and deducted from the duct reading to give the net value (see Figure 4).

Manometer

Any U-tube, even though crudely constructed, will serve these purposes. It may readily be made by bending glass tubing into the shape of a U and attaching it to a strip of wood or metal having a scale marked in inches.

Respiratory Protection

Helmets

In order to aid in the design and sale of safe helmets, and to provide manufacturers with scientific facilities for testing, the U. S. Bureau of Mines, in 1935 at its Pittsburgh Station, inaugurated a testing procedure for commercial helmets and approves (or disapproves) the devices submitted to it. Following is a list of helmets and their manufacturers on the approved list at the time this Manual was prepared. No helmet not on the approved list should ever be employed.

How to Examine a Helmet for Approved Marking

Every approved helmet that is manufactured must be marked with the approval number BM (the initials of the Bureau of Mines), and four digits. At the time of this writing the approval numbers range from BM-1907 to BM-1919. Examine helmet air supply hose, and air regulating valve, if any, and if *no approval marking* (see above) *can be found*, the helmet must be considered unapproved.

Rate of Air Supply

Approval of a helmet indicates that with an adequate supply of clean air, all exterior dust will be excluded from the interior of the helmet. However, there is nothing in the approval system to insure correct installation and operation; it is the responsibility of the user to provide an adequate air supply.

Definition of Adequate Air Supply

Adequate air supply is defined as a rate of air flow to the helmet not less than 6 cubic feet per minute for loose fitting helmets (Pangborn, Sly, Willson, Blastfoe), and at least 4 cubic feet per minute for those having a tight-fitting face piece under the hood (Cesco and MSA). This value is based on extensive tests of dust concentration inside the helmet during actual abrasive blasting operations.

Air Supply Equipment

The quality of the air supplied to the blaster's helmet is a factor of greatest importance not only to safety but to comfort as well. There are two methods of supplying air to the helmet (a) by special blowers requiring no internal lubrication of parts through which the air passes and (b) by bleeding air from the compressed air line used in blasting and other processes.

The use of air from the compressed air line is fundamentally inferior to the use of special supply pumps.

This Article to be concluded in the May Issue of OCCUPATIONAL HAZARDS

TOP OPERATING EFFICIENCY
FOR at Reduced Maintenance Cost
PRODUCT IMPROVEMENT...
PLANT ENGINEERS RECOMMEND
Schmieg
DUST AND FUME CONTROL EQUIPMENT
Below is shown a 14000 CPM Centri-Merge Arrester Unit on a cast iron dust exhaust system.
CYANIDE FURNACES fume exhaust system is connected to a Centri-Merge Washer.
To Fit Both Plant and Product
Dust and fume control equipment correctly designed and manufactured is of vital importance to the safety and health of plant personnel, and results in product improvement. Schmieg engineers pioneered this principle of dust and fume control.
Plant engineers call upon Schmieg to design and build dust and fume control equipment to fit both plant and product. Typical installations by Schmieg include dust and dirt arresters, fume exhaust air washers, kerosene and welding fume exhaust units, stock and dust handling equipment in textile plants, cyclone collectors for brake lining dust, polishing and buffing dust collectors . . . to name just a few.
Schmieg dust and fume control units give you (1) reduced operating and maintenance expense, and (2) maximum efficiency in the removal of dust and fumes for improvement of working conditions and product quality.
THE best AIR PURGE is CENTRI-MERGE
Our engineers will be pleased to consult with you in the solution of your problem
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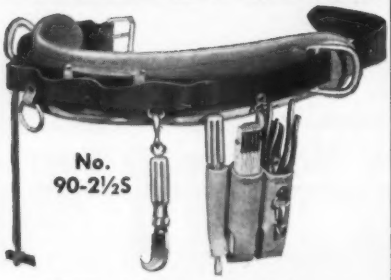
IT'S NOT ENOUGH TO BE SURE BE *Positive* WITH *Miller*



All Miller belts are designed for comfort, regardless of position on pole, and to keep tools free at all times. No. 90 2½S is constructed of fine leathers with a top and bottom rolled edge, giving added comfort and cushion to the body. Floating tool saddle. Solid comfort.

Made of two thicknesses of Yellow Latigo leather sewn from end to end. YL Series.

Free

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Company_____
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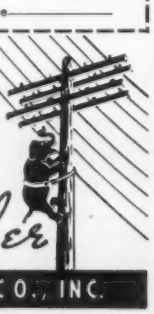
For SAFETY *see Miller* FIRST



Miller
EQUIPMENT CO., INC.
FRANKLIN, PENNA.

Useful Literature

UL-25 . . . The Bennett Mfg. Co. have published a two color catalog describing their complete line of waste receptacles.

UL-26 . . . In simple outline form, Bulletin 222—just released by L. E. Hicks & Son, Inc.—summarizes the cost to industry of dermatitis, its prevalence in various branches of industry, and the methods of preventing it.

UL-27 . . . The Edmont Mfg. Co. have recently published a brand new catalog describing the complete line of Edmont work gloves. This eleven page catalog is multi-colored and is loaded with photographs of the various types of work gloves—each photograph accompanied with detailed description and specifications.

UL-28 . . . The Stueland Mfg. Co. have prepared a circular describing their Lamp Changer. This changer eliminates the use of a ladder when replacing lamps.

UL-29 . . . Klear-Vu Products, Inc. have prepared a poster giving data on their Klear-Vu Safety Caps, Safety Aprons and Safety Arm Guards.

UL-30 . . . Plasti-Kote, Inc. have available a folder describing their SHUR - GRIP, a tough abrasive wear - resistant surfacing material easily applied by trowel.

UL-31 . . . Spectrum colors combine with a stylized factory silhouette to make the cover of American-Marietta Company's new volume, "Plan Before You Paint Your Plant," a symbol of the booklet's mission. For plant superintendents, maintenance engineers, purchasing agents, industrial architects, painting foremen and safety engineers, it is an invaluable and dramatic guide to planning a scientific industrial color scheme.

New SURETY LABORATORY FIND
SURESEAL PK COATED
FABRIC WORK GLOVES

Surety's newly developed Sureseal PK Coating gives you lower glove costs, gives your workers maximum hand protection, maximum comfort.

Sureseal PK surpasses rubber and all standard synthetics in resistance to virtually all industrial chemicals — acids, alkalis, oils, petroleum hydrocarbons and solvents, alcohols, ethers, esters, and so on down the list.

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Jumbo size, curved fingers, available in knit wrist, band-top, 12- and 14-inch gauntlets, and ventilated back types.

THE SURETY RUBBER CO. CARROLLTON, OHIO

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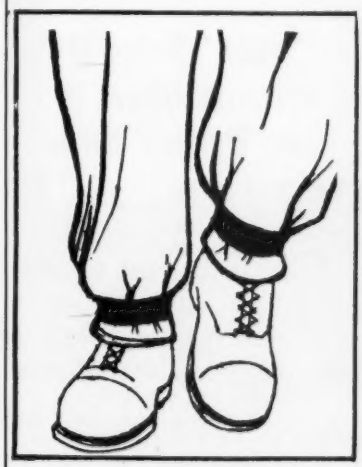
Holliston, Mass.
Safety Specialists, Inc. 74
69 Oriental Street, Newark 4, N. J.
Schrader's Son, A., Div. of Scovill Mfg. Co. Inc. ..75-76
470 Vanderbilt Avenue, Brooklyn 17, N. Y.
Scott Aviation Corporation 49
Lancaster, New York
Standard Safety Equipment Co., Chicago, Illinois .96-97
127A Washington Street, Newark 2, N. J.
State Insurance Fund 29-30-31
625 Madison Avenue, New York City 22
Stepan Chemical Company, The 111
1353 N. Branch Street, Chicago 22, Ill.
Stephenson Corporation 52
154 Broad Street, Red Bank, N. J.
Sugar Beet Products Company, Saginaw, Mich. .. 28
1228 National Newark Bldg., Newark 2, N. J.
Surty Mfg. Co., Inc., The 8
4139 West Kinzie Street, Chicago 24, Ill.
Titan Safety Shoe Company 102
212 Essex Street, Boston 11, Mass.
United States Safety Service Company 27
1215 McGee Street, Kansas City 6, Mo.
Vestal, Inc. 89
2413 Third Avenue, New York City 51
Wahlert Products Corporation 26
1 DeKalb Avenue, Brooklyn 1, N. Y.
Watchemoket Optical Company, Inc. 55
232 W. Exchange Street, Providence, R. I.
West Disinfecting Company 67-68
42-16 West Street, Long Island City
Wheeler Protective Apparel, Inc. 20
224 West Huron Street, Chicago 10, Illinois
Wilkins Company, The 57
Cortland, N. Y.
Willson Products, Inc. 22-23
2nd & Washington Sts., Reading, Pa.
Wilson Corporation, W. S. 21
11 South William Street, New York City
Wrisley Company, Allen B. 85
347 Fifth Avenue, New York City 16
All-Out Mfg. Corp. 34
2 Park Ave., New York City 16
American Allsafe Co. 5-6
1245 Niagara St., Buffalo 13, N. Y.
Bashlin Co., Wm. M. 41-42
Grove City, Pa.
Dilley Manufacturing Co. 108
1656 Ansel Road, Cleveland 6, Ohio
Duo-Dial Quiz Corp. 114
200 Varick St., New York City 14
Duracite Sales Company 110
388 South St., Newark 5, N. J.
Medical Supply Company 59
1027 West State St., Rockford, Illinois
Nyasco Products 90
22-28 33rd Street, Long Island City 5, N. Y.
Randolph Laboratories, Inc. 109
8 East Kinzie St., Chicago 11, Illinois
Safe Lighting Co. Inc. 17
90-16 Astoria Blvd., Jackson Heights, N. Y.
Wallace Optical Co., Inc. 99
12334 East Jefferson Ave., Detroit 14, Mich.



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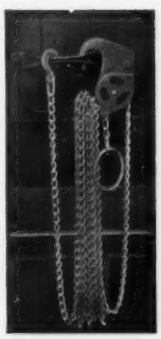

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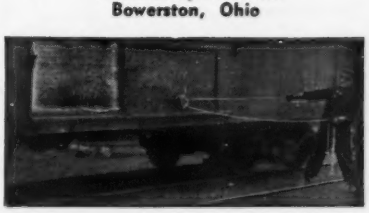

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Used for separating sheets, transferring from piles or stacks . . . many other uses on all non-porous materials.

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